



# ENGINEERING DIRECTORY

*Buyers' Reference Section—1922 Edition*

Classifying the Manufacturers of Mill, Steam, Mine, Plumbing,  
Heating and Allied Lines of Supplies, Tools and Machinery.

THE CRAWFORD PUBLISHING CO., CHICAGO

## POWELL VALVES

*(Especially the "White Star" Valve)*

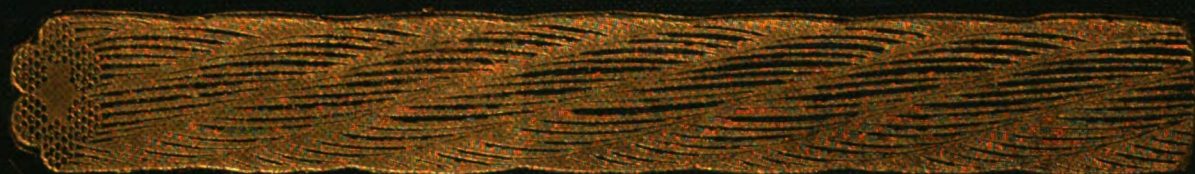
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Ball and Roller Bearing Hangers  
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—accepted as the best



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THE FASTEST GROWING WIRE ROPE PLANT IN AMERICA

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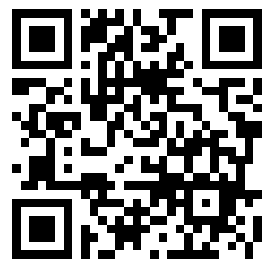


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## Buy Your Drills for Service Satisfaction

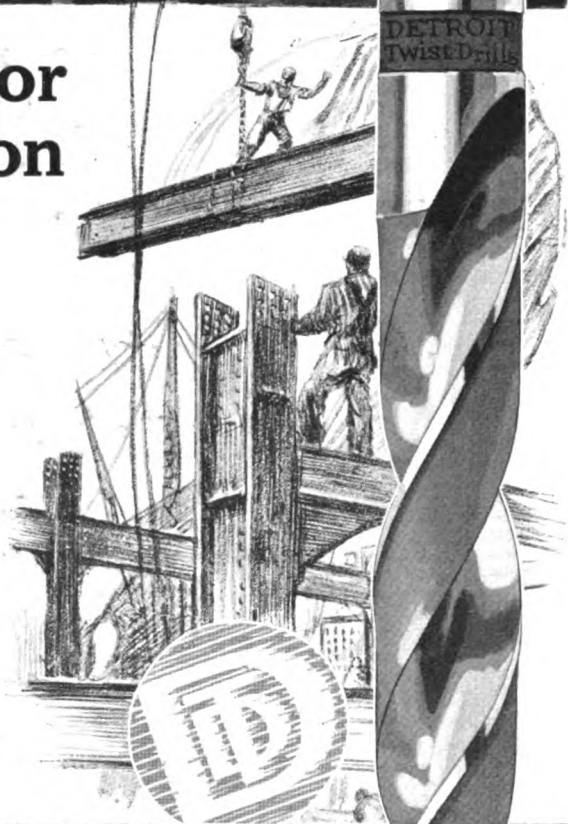
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Such workmen have a pronounced preference for Detroit Twist Drills. They know from experience that Detroit Twist Drills give real service satisfaction—that they give more accurate holes with less regrinding and less cost for power.

*When ordering, specify  
Detroit Twist Drills*

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16



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to handle a line of**



**DRILLS, REAMERS, SOCKETS,  
COUNTERBORES, MILLS, SCREW  
EXTRACTORS, ARBORS, MANDRELS,  
HIGH SPEED TOOLS**



**THE CLEVELAND TWIST DRILL CO.**  
NEW YORK · CLEVELAND · CHICAGO

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1913



# ENGINEERING DIRECTORY

Buyers' Reference Section—1922 Edition

A Comprehensive Directory of  
Manufacturers of Mill, Steam,  
Mine, Plumbing, Heating,  
Lighting *and* Allied Lines of  
Supplies, Machinery *and* Tools

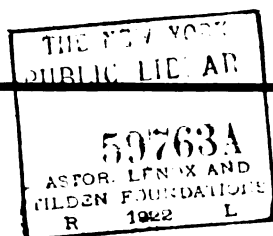


***The* CRAWFORD PUBLISHING CO.**

Ellsworth Building, 537 South Dearborn Street

**CHICAGO**

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# FOREWORD

The **ENGINEERING DIRECTORY**, published by The Crawford Publishing Co., consists of two Sections, the **BUYERS' REFERENCE SECTION**, which is this volume, and the **SELLERS' GUIDE SECTION**, briefly described below. The Buyers Reference Section contains classified lists of Manufacturers of Mill, Steam, Mine Contractors', Plumbing and Heating Supplies, Tools, Machinery and other Industrial and Engineering Supplies.

Manufacturers' products are classified under approximately 4,000 headings. Trade or brand names of goods and specialties are also given in alphabetical order.

Another feature is the list of the same manufacturers arranged alphabetically, naming briefly the goods produced, and giving addresses of main offices and branches.

The value of this **BUYERS' REFERENCE** can hardly be over-estimated. Orders and inquiries are received nearly every day in every supply house for goods bearing trade or brand names, or special goods not regularly carried in stock. This Directory meets the necessity of locating the manufacturers of such goods promptly and with a minimum of time and effort.

The continual advent of new manufacturers of engineering and industrial supplies into the field, the addition of new lines and specialties by those already established, and the thousands of trade names by which they are known, makes imperative the publication of some work wherein the various kinds of goods in these lines are carefully classified and arranged in concise, usable form for instant reference. It amounts to an index to the catalogs of over 8500 manufacturers.

Articles are listed under their noun names, with descriptive words following. For example, look for "Belting, Leather," and "Valves, Gate," instead of "Leather Belting" and "Gate Valves," as they are spoken.

In compiling lists such as are published in this directory, every one in the trade will recognize the impossibility of absolute completeness or accuracy. Omission of a line which should be listed is probably due to the failure of the manufacturer to furnish the necessary information. Errors will occur even with the painstaking effort we have made to make the classification complete and the firm names and addresses correct, and the publishers will appreciate having their attention called to errors or omissions.

Manufacturers who advertise in this Directory are all interested in selling through supply dealers. Preference should be given when possible to advertisers, whose names appear in bold face type. To locate advertisements, consult the index on the following pages.

The **SELLERS' GUIDE SECTION** of the Directory consists entirely of mailing lists selected as being most useful to manufacturers of engineering and industrial supplies and machinery. Mentioned briefly, there are lists of Jobbers and Dealers in Mill, Steam and Mine Supplies, Tools and Machinery; Jobbers of Plumbing and Heating Supplies, Jobbers of Hardware, Dealers in Plumbers' Sundries and Specialties, Jobbers and Dealers in Automobile Supplies and Electrical Supplies. These lists cover a vast field of purchasers of engineering and industrial supplies, and furnish the medium for direct advertising by letters, circulars and catalogs.

Chicago, January, 1922.

THE CRAWFORD PUBLISHING CO.



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**Dealers in  
Mill Supplies  
Handle**

Abrasives  
 Acetylene Lights  
 Anvils  
 Asbestos Goods  
 Babbitt  
 Bearings  
 Belting  
 Benches  
 Bits and Drills  
 Blowers  
 Boilers  
 Bolts and Screws  
 Brass Goods  
 Brooms and Brushes  
 Chain  
 Chisels  
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 Contractors' Equipment  
 Conveying Equipment  
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 Drills  
 Dynamite  
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 Elevating Equipment  
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 Friction Clutches  
 Gauges  
 Graphite Products  
 Grease  
 Grease Cups  
 Grinders  
 Hammers  
 Heaters  
 Hoists  
 Hose  
 Hydrants  
 Jacks  
 Lathes  
 Machine Tools  
 Machinists' Supplies  
 Metals  
 Nails  
 Oakum  
 Oiling Devices  
 Packings  
 Paints  
 Picks and Shovels  
 Pipe and Fittings  
 Pneumatic Tools  
 Power Transmission  
 Pumps and Supplies  
 Radiators  
 Reamers  
 Roofing  
 Rope  
 Rubber Goods  
 Safety Devices  
 Sandblast Machines  
 Saws  
 Scales  
 Screws  
 Shafting  
 Solder  
 Steam Specialties  
 Threading Tools  
 Tools, All Kinds  
 Trucks  
 Truck Casters  
 Valves  
 Vises  
 Waste  
 Welding & Cutting Apparatus  
 Wheelbarrows  
 Wire  
 Wire Rope

## *Every Sales and Advertising Manager*

interested in building up repeat order business through the mill supply dealer, is vitally interested in the

### **2,800 DEALERS IN THE UNITED STATES**

because they cover their territories intensively with a total of 25,000 salesmen, and combined do an annual business of \$2,000,000,000. Every factory, mine, machine shop and industrial enterprise is energetically solicited for business.

This brings us naturally to the most direct and economical way to reach these distributors, and that is through the advertising columns of

### **MILL SUPPLIES** "the journal of quality"

a publication devoting all its space to the interests of the manufacturers and distributors of that great line generally classified as "mill supplies," a partial list of which appears in column form on this page.

The publication is a Member of the Audit Bureau of Circulations and the Associated Business Papers, Inc., thus insuring circulation truthfulness and standardized editorial practice.

Can we serve you? May we send you rate card, a copy of the magazine, our detailed survey of the mill supply jobber field or any other information that may be desired? There never was a time when manufacturers were more interested in improving sales methods and cutting costs. We believe we can aid you.

**THE CRAWFORD PUBLISHING CO.**

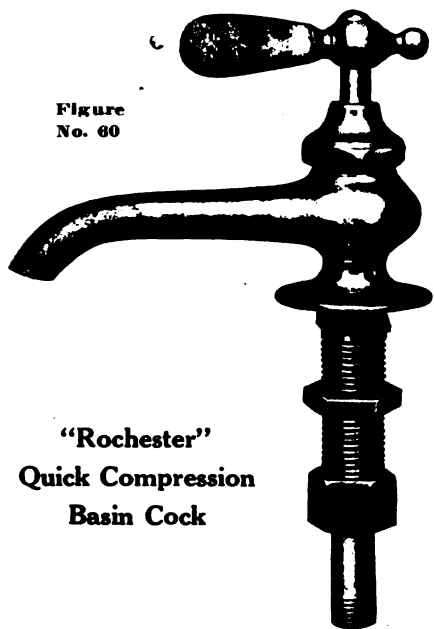
**537 S. Dearborn St., Chicago**

# The Atkinson Company

· ROCHESTER, N. Y.

**"ROCHESTER" Quality Plumbing Brass Goods**

Figure  
No. 60



**"Rochester"  
Quick Compression  
Basin Cock**

All Figures  
in  
Compression  
and  
Quick  
Compression

Catalog  
and  
Net Prices  
On Request

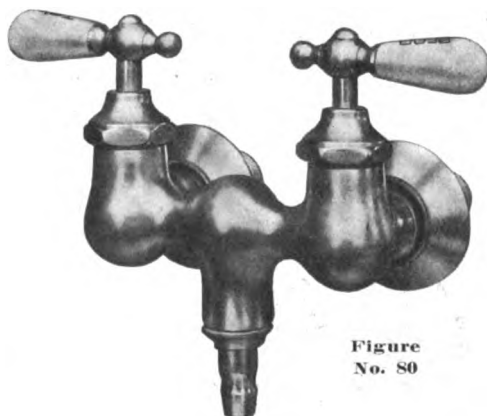


Figure  
No. 80

**"Rochester" Quick Compression  
Double Bath Cock**

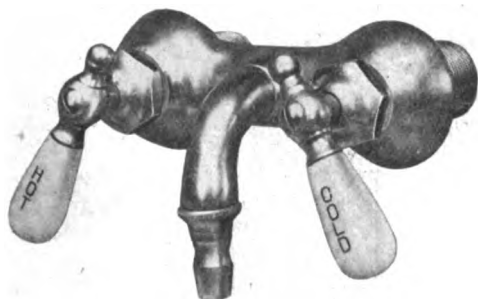


Figure No. 87

**"Rochester" Quick Compression  
Double Bath Cock**

Workmanship and Finish Equal to the  
Best, but Sold at Competition Prices.

All  
Goods  
Tested  
to  
200 Lbs.  
Water  
Pressure

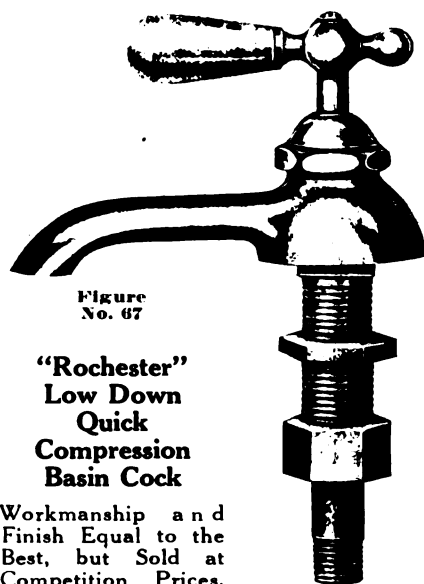


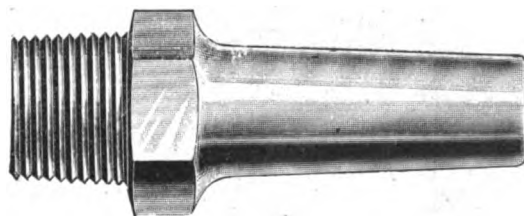
Figure  
No. 67

**"Rochester"  
Low Down  
Quick  
Compression  
Basin Cock**

Workmanship and  
Finish Equal to the  
Best, but Sold at  
Competition Prices.



Extra Heavy Floor Drains  
1½"; 2" and 3". Female Iron Pipe.



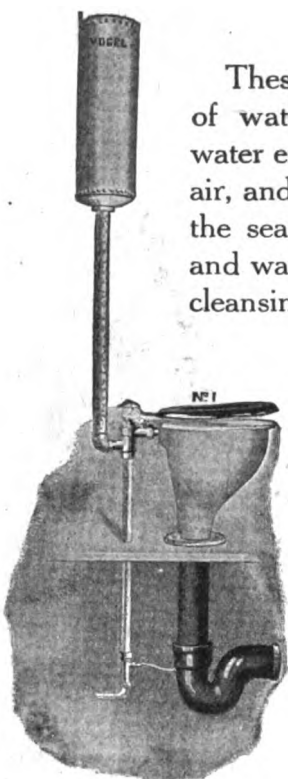
Solder Nipples and Bushings.  
Full Weight, All Sizes, Up to 6".

Soldering Unions; Ground Joint Brass Unions, (Vent Couplings).

## VOGEL Frost-Proof Outfit No. 1

### A Water Saver

These closets use but four gallons of water at a flush. Only enough water enters the tank to compress the air, and no more water is used until the seat is again operated. This air and water pressure flush is strong and cleansing. The valve working parts can be easily removed in a few moments by simply unscrewing the one flush cap back of bowl.



Vogel No. 1

## VOGEL No. 5 Factory Outfit

This fixture fills the demand for a strong and durable automatic water-saving closet outfit for factory use. The valve device is extremely simple and repairs,

though seldom necessary, can be easily made by removing the valve cap back of bowl



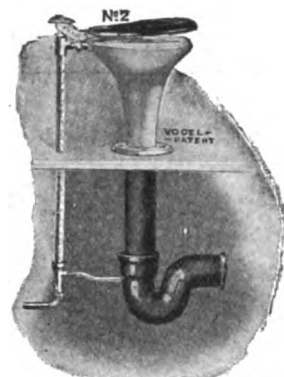
Vogel No. 5

## VOGEL No. 9 School and Factory Water Closet

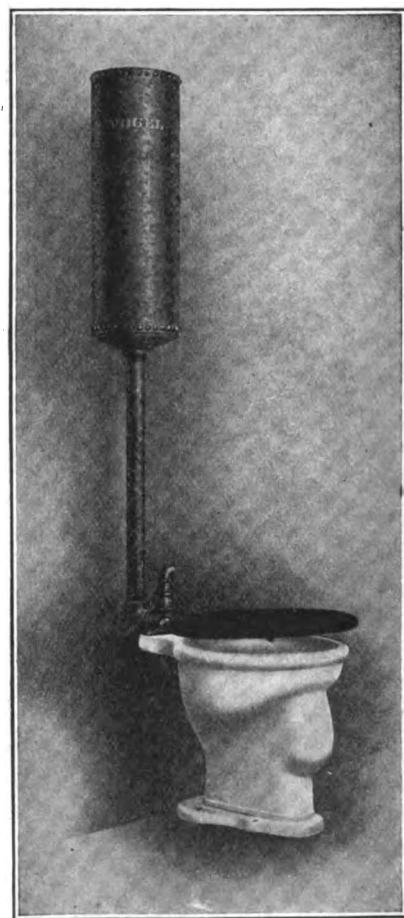
### Big Points of Superiority:

- Strength
- Reliability
- Simplicity
- Durability
- Moderate Cost

## VOGEL Frost-Proof Outfit No. 2



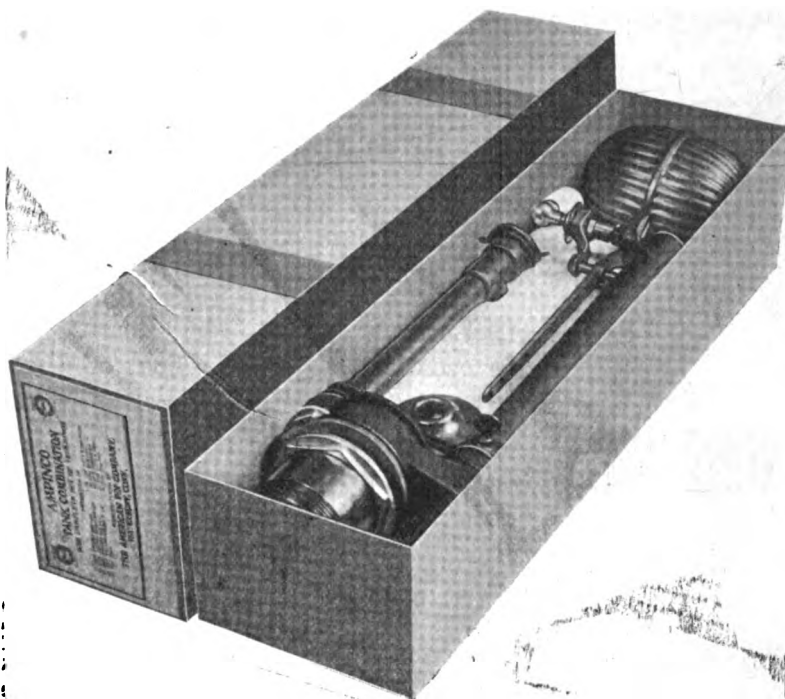
This outfit contains but one packing and flushes while in use, after which no water remains in fixture.



Vogel No. 9

**JOSEPH A. VOGEL CO.**  
St. Louis, Mo. **WILMINGTON, DEL.**





# AMPINCO

## Tank Trimmings

### Progressive

Because they are designed and built to avoid troubles developed from past experience.

### Durable

Because only materials known as most substantial and lasting in water are used in their design and construction.

### Dependable

Because, operating principle, workmanship and materials are right by test.

### Simple

Because, they contain less integral and assembled parts than any other known combination.

### Accessible

Because Ampinco Tank Valve, Ball Cock or Lever Mechanism can be removed and replaced without tools of any kind in one minute.

### Essential

Because buying sets complete keeps your stock balanced and enables placing the responsibility for troubles immediately and without question.

# The AMERICAN PIN CO.

## WATERBURY, CONN.

*We earnestly solicit inquiries for prices and deliveries from Jobbers and Tank Manufacturers*

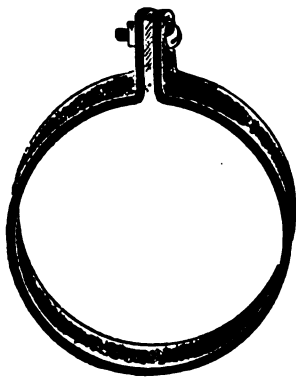


Fig. 10



Fig. 30

## MODERN

STEEL BAND PIPE HANGERS are the most practical and economical on the market. By using our Extension Bar in connection with the hangers you can make quick adjustments without taking measurements or doing any thread or pipe cutting.

*Once tried, always used.*



Fig. 60

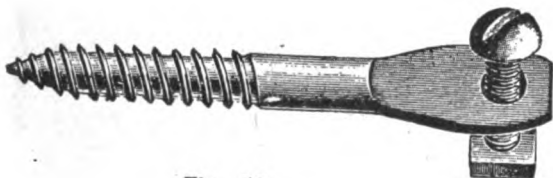


Fig. 50

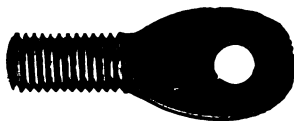


Fig. 70

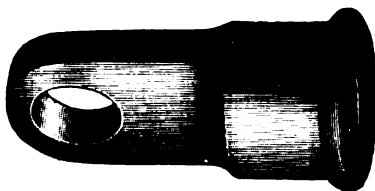


Fig. 80

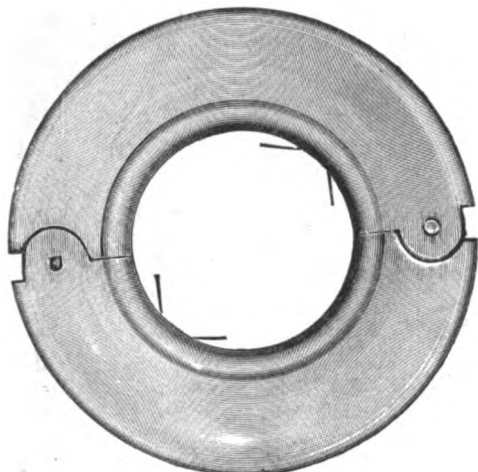


Fig. 130



Fig. 20

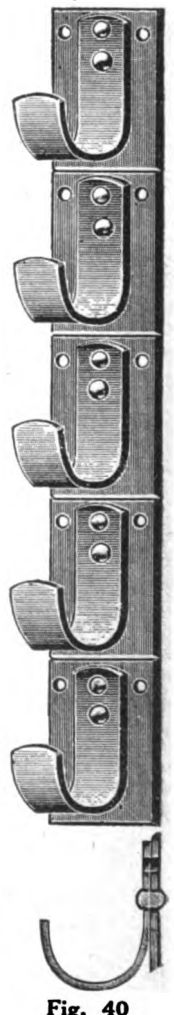


Fig. 40

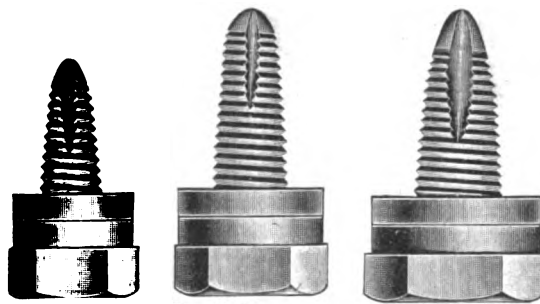
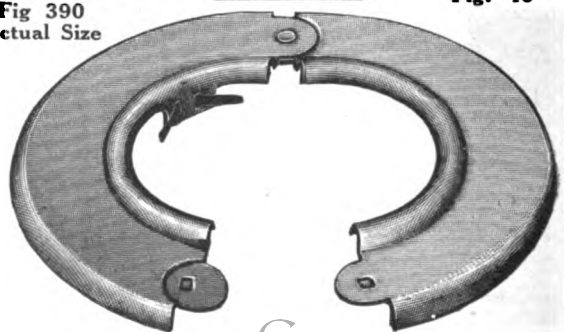
## MODERN

STEEL HOOK PLATES are made up in strips of thirty hooks, from which can easily be cut any desired number of hooks. They are stronger and cheaper than any other Hook Plate.

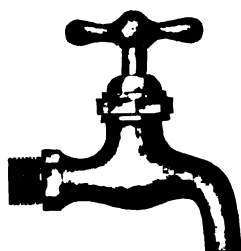
Our Catalog "B" is ready. Send for it.

## THE MODERN MFG. CO.

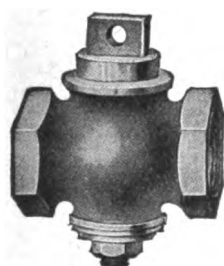
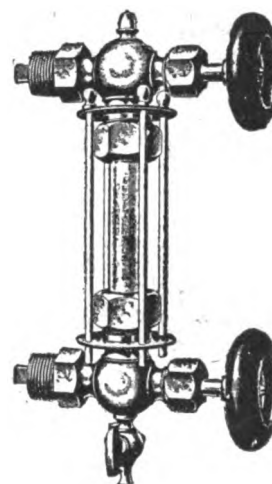
Manufacturers of  
Plumbers and Steamfitters' Specialties  
Cleveland, Ohio

Fig. 390  
Actual Size

We manufacture a complete line  
of High Grade Brass Goods for  
**STEAM, WATER AND GAS**  
All goods tested. Send us your orders



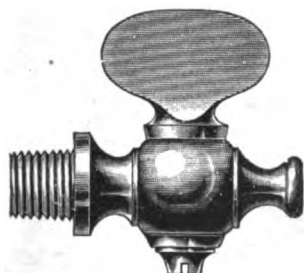
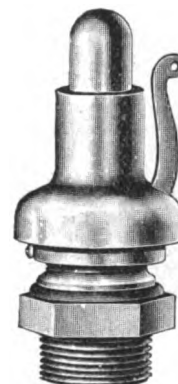
**Water Gauges**  
**Gauge Cocks**  
**Air Cocks**  
**Radiator Air Valves**



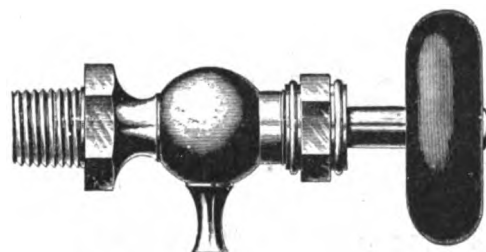
**Cylinder Cocks**  
**Priming Cups**  
**Gasoline Cocks**  
**Compression Bibbs**  
**Compression Stops**  
**Ground Key Bibbs**  
**Ground Key Stops**  
**Basin Cocks**



**Brass Pipe Fittings**  
**Gas Service Cocks**  
**Steam Cocks**  
**Pop Safety Valves**



**Globe Valves**  
**Gas Stove Cocks**  
**Gas Hose Cocks**

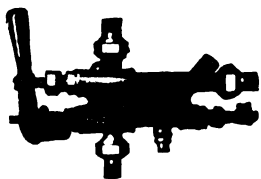


**The McRae & Roberts Company, Detroit, Mich.**

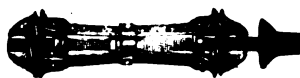
ESTABLISHED 1887



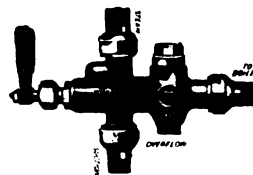
"Buffalo" Glass Body  
Cylinder Oil Pump



"Sherwood"  
Double Tube Injector



"Favorite" Flue Blower



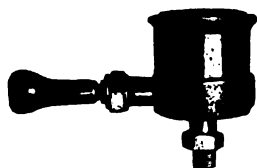
"Buffalo Automatic"  
Injector



"Sherwood" Screw  
Feed Grease Cup



"Eagle" Ejector



"Felthousen" Hand Oil  
Pump  
Capacities,  $\frac{1}{4}$  to 3 pints,  
brass or glass body



Have you received a  
copy of the Sherwood  
Book? It is well worth  
reading.

Write your name and  
address on the margin  
of this page. Forward  
it to us, and we will  
send the Sherwood  
Book to you by return  
mail.

## "Engineers' Favorite" Is Also the Jobbers' Favorite

Because it is dependable—and absolutely satisfactory even under most rigorous conditions, the "Engineers' Favorite" is not only stocked but sold by leading jobbers and dealers everywhere.

For 35 years the "Engineers' Favorite" has been recognized as the standard flue cleaner for tubular boilers—and today dealers are building up a profitable business on this superior flue cleaner which is built to stand up under hard usage—to withstand the wear and tear to which a flue cleaner is subjected.

Then, too, the "Engineers' Favorite" is guaranteed by the Sherwood Manufacturing Company—and while every scraper is thoroughly inspected and carefully tested we will replace any part found defective after being sold by the dealer.

The "Engineers' Favorite" makes satisfied customers. It helps create confidence in the other products sold by jobbers handling the "Engineers' Favorite"—and particularly the Sherwood Engineering Specialties.

With the Sherwood Manufacturing Company offering business getting sales and advertising co-operation to jobbers, the Sherwood line is an especially valuable asset under present conditions. If you have not received complete information as to the manner in which we are aiding jobbers to build up their business, we will gladly send you facts and figures.

Write for complete information  
regarding our dealer proposition

**SHERWOOD MANUFACTURING COMPANY**  
BRASS FOUNDERS AND FINISHERS  
Sole Manufacturers of Sherwood Engineering Specialties  
BUFFALO, N. Y.



"Hart" Oil Pump



"Felthousen" Glass  
Body Hand Cylinder  
Oil Pump



"Niagara"  
Plain  
Grease Cup



Sight-Feed  
Oil Cup

**SHERWOOD**  
BUFFALO - N.Y. - U.S.A.

**If You Want to Have  
Satisfied Customers**

**Be sure to recommend  
to them**



## **The Hovalco Blow-Off Valve**

This valve is being specified by leading engineers to act as a companion blow-off to the famous Homestead Quarter-Turn Blow Off Valve.

You will find it to your advantage to carry some of these in stock. They are made with electric furnace semi-steel bodies, high grade steam bronze trimmings and special composition seat and disc. The seat and disc are renewable, reversible and regrindable.

## **Homestead Quarter Turn Valves**



are used on various pressures and under various conditions. You can recommend these valves to your customers whenever they find occasion to use a valve which is superior to all others.

**Straightway, Three-Way, Four-Way and Angle Valves**

**Homestead Valve Manufacturing Co.**  
**Homestead, Pennsylvania**

**New York Office—242 Lafayette St.,**

**New York, N. Y.**

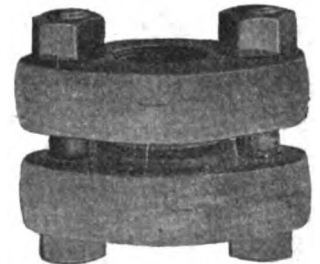
# DROP FORGED STEEL HYDRAULIC FITTINGS



**Ells, Tees, Crosses,  
Flange Unions, Couplings,  
Plugs, Bushings, Stop, Y,  
Check Valves, etc.**

**For 2500 lb. to 10,000 lb. Working  
Pressures**

*Send for New 4th Ed. Catalog "B-38"*



**ALSO**

**Drop Forged Steel Companion Flanges**

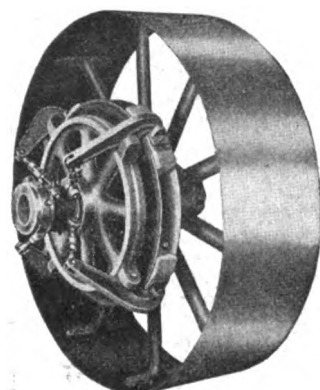
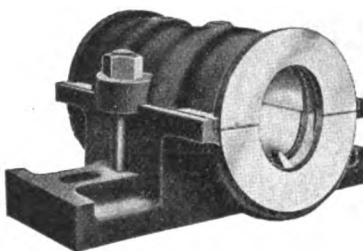
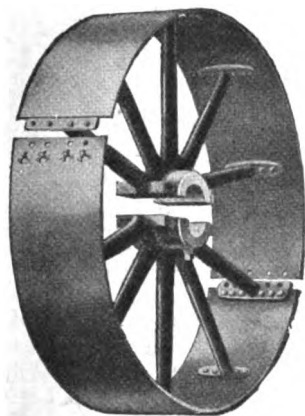
**Semi-Steel and Cast Steel Flanged Ells, Tees, and Crosses**

Hydraulic Check, Stop, Speed Regulating Check, and Unloading Valves. Hydraulic Operating, Automatic By Pass, Spring Type and Weighted Relief Valves. Air Operating Control Valves, and Metalwood Patented Three Way Quick Operating Single Pressure Hydraulic Valves.

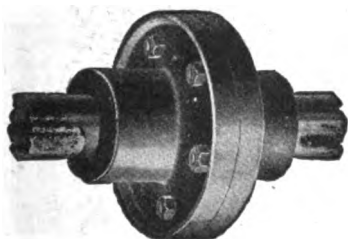
**METALWOOD MANUFACTURING COMPANY**

**Hydraulic Machinery and Equipment  
DETROIT - MICH.**

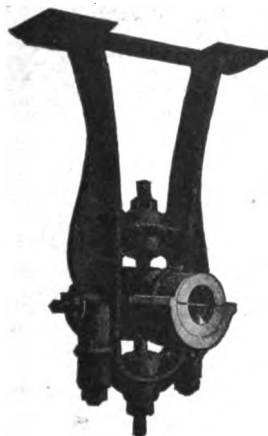
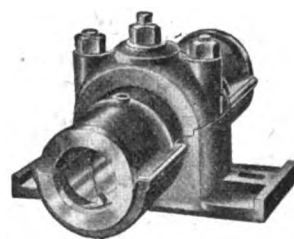




## MEDART Transmission Equipment Complete



Including the manufacture of Turned and Polished Steel Shafting (all sizes up to 6" diameter), the complete Medart Line embraces every description of mechanical transmission appliance which is used in connection with Shafting.



Shafting, Couplings, Collars, Hangers, Pillow Blocks and Bearings, Pulleys, Friction Clutches and Cut-Off Couplings, Rope Sheaves, all kinds of Gearing, Sprockets, Chain, Belt Tighteners, Fly Wheels, Take-Ups, etc., are embraced in our Line.

We emphasize the great advantage to the buyer when he can secure entire transmission outfits, including Shafting, from one source, and at fair prices.

## Prompt Shipments

The unusual transportation facilities of St. Louis, offering package car service in all directions, combined with our superior manufacturing advantages and our large stocks of ready-to-ship Standard Products, enables us to make double-quick shipments on short notice.

Jobbers or dealers should not overlook the advantages and profit in selling Medart Equipment. Our prices are always attractive; our products are guaranteed to give satisfaction on the money-back basis our Service will harmonize the demands stipulated.

*The promptness which characterizes MEDART Service throughout will extend to your request for a MEDART Catalogue.*

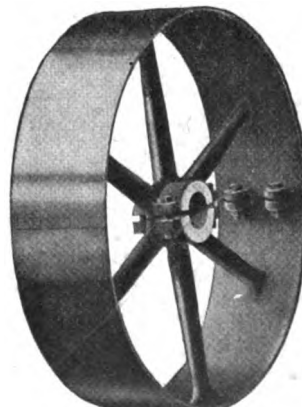
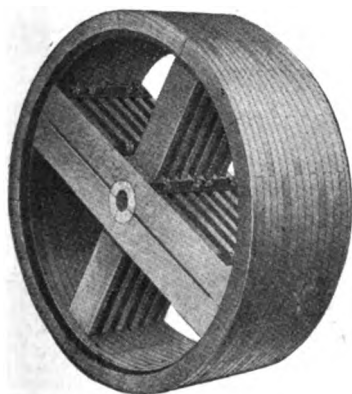
**Medart Patent Pulley Co.**  
WORKS—ST. LOUIS, MO.

Cincinnati Warehouse and Office, 211 Vine St.

Chicago  
Office  
170 West  
Washington  
Street



Philadelphia  
Office  
Colonial  
Trust Co.  
Bldg.



## MYERS SELF-OILING POWER PUMPS FOR GENERAL SERVICE

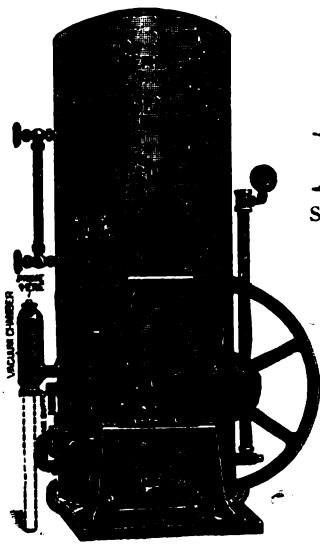
**N**O new pump construction ever patented and placed on the market has attained such general approval and widespread praise in such a short time as that of the MYERS SELF OILING BULLDOZER POWER PUMPS and Working Heads.

The positive oiling system, the covered working parts, the extra size valves, the unrestricted waterways, the improved method of power application—all features of Myers Self-Oiling Pumps—have simplified and created a new standard of power service the like of which is not to be equalled by old-style pumps.

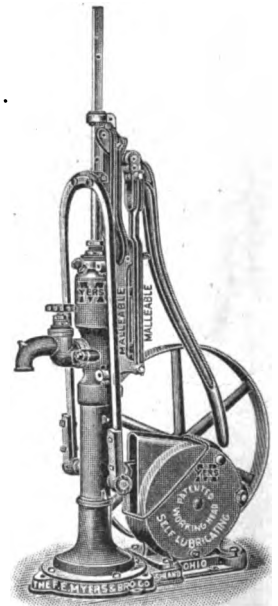
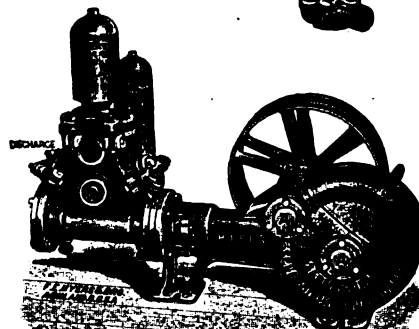
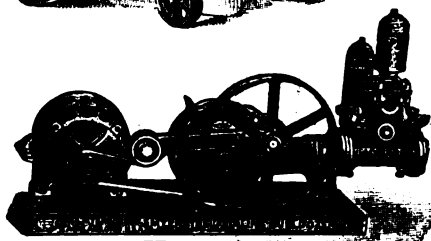
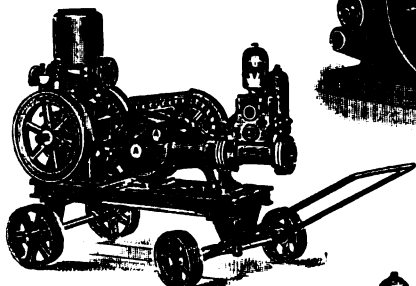
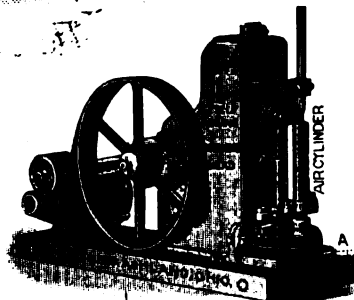
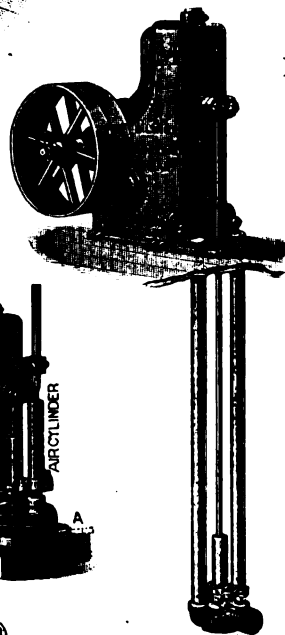
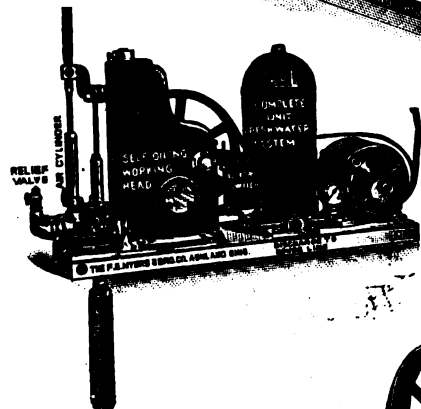
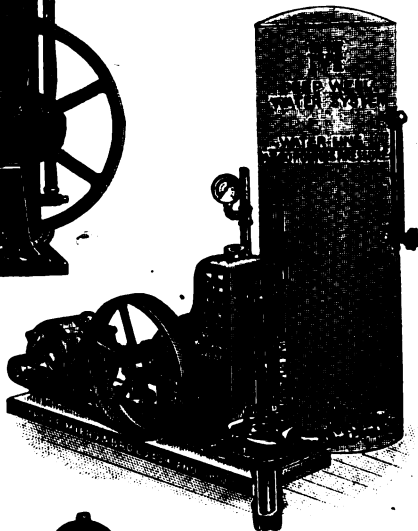
Catalog and full details  
on request.

**The  
F. E. Myers &  
Bro. Co.**

No. 51 Fourth Street  
**ASHLAND  
OHIO**



Other Myers  
Products: Pumps  
for Every Purpose,  
Hay Tools, Door  
Hangers, Store  
Ladders, Etc.



# Classified Directory of Manufacturers

OF

## Mill, Steam, Mine, Plumbing and Heating Supplies, Tools and Machinery, in the United States

Look for the noun name of article

Names of Advertisers are set in bold face type.

Index to advertisements Pages 7 and 8

This Directory is endorsed by the American Supply and Machinery Manufacturers Association. This mark (♦) is prefixed to the names of members of this association wherever they appear in the various lists.

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(See also "Emery" and Wheels, Grinding.)

- Abrasive Co., Philadelphia, Pa.  
Alden Speare's Sons Co., Boston, Mass.  
♦ Alundum, Crystolon—Norton Co., Worcester, Mass.  
Angular Grit—Pittsburgh Crushed Steel Co., Pittsburgh, Pa.  
Carbolon, Exolon—Exolon Co., The, Blasdel, N. Y.  
Carboloynt—American File Sharpener Co., Brooklyn.  
Carbonite, Lionite—General Abrasive Co., Niagara Falls, N. Y.  
Chicago Wheel & Mfg. Co., Chicago, Ill.  
Cleveland Abrasive Wheel Co., The, Cleveland, O.  
Colossus—James H. Rhodes & Co., Chicago, Ill.  
Dwite—Hammacher, Schlemmer & Co., New York, N. Y.  
Flint Shot—U. S. Silica Co., Chicago, Ill.  
Helmet—Chas. H. Bealy & Co., Chicago, Ill.  
Manning—Manning Abrasive Co., Inc., Troy, N. Y.  
Metalite—Hammacher, Schlemmer & Co., New York.  
Niagara Emery Mills, Inc., New York, N. Y.  
Safety Emery Wheel Co., Springfield, O. (Artificial.)  
Tripoli Flour—American Tripoli Co., Seneca, Mo.  
Wausaw Abrasives Co., Chicago, Ill.

### ABSORBERS, SHOCK, HYDRAULIC MACHINERY.

Southwark Foundry & Machine Co., Philadelphia, Pa.

### ABSORBERS, SHOCK, FOR HOISTS.

- ♦ Chisholm-Moore Mfg. Co., Cleveland, O.  
♦ Williams, J. H. & Co., Brooklyn, N. Y.

### ACCESSORIES, AUTOMOBILE AND MOTOR BOAT.

- ♦ Powell, Wm., The Co., Cincinnati, O.

### ACCESSORIES, FITTINGS OR FURNISHINGS FOR BATH AND TOILET ROOMS.

(See Fittings and Furnishings, Bath and Toilet Room.)  
Avco—Alliance Vitreous China Co., The, Alliance, Ohio.  
Eastern Specialty Mfg. Co., Scranton, Pa.

### ACCESSORIES, ROCK DRILL.

Ingersoll Rand Co., New York.

### ACCESSORIES, WATER METER.

Ford—Ford Meter Box Co., Wabash, Ind.

### ACCUMULATORS, HYDRAULIC.

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Allen Machine Co., Erie, Pa.  
♦ Bethlehem Steel Co., Bethlehem, Pa.  
Birdsboro Steel Fdy. & Mach. Co., Birdsboro, Pa.  
Buckeye Iron & Brass Works, Dayton, Ohio.  
Camden Iron Works, Camden, N. J.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Crossley Machine Co., Trenton, N. J.  
Dunning & Boschert Press Co., Syracuse, N. Y.  
Elmes Engineering Works, Chas. F., Chicago, Ill.  
French Oil Mill Machinery Co., Piqua, O.  
Garrison, A., Foundry Co., Pittsburgh.  
Hydraulic Press Mfg. Co., Mt. Gilead, O.  
Mesta Machine Co., Pittsburg, Pa.  
Morgan Engineering Co., Alliance, O.  
Niles-Bement-Pond Co., New York, N. Y.  
Perrin, Wm. R. & Co., Chicago, Ill.  
Reeves Bros. Co., Alliance, O.  
Shriver—T. Shriver & Co., Harrison, N. J.  
Southwark Fdy. & Machine Co., Philadelphia, Pa.  
Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
Watson-Stillman Co., Aldene, N. J.

Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn.  
Wood & Co., R. D., Philadelphia, Pa.  
Wood, William H., Media, Pa.  
Wilson-Snyder Mfg. Co., Pittsburg, Pa.  
Worthington Pump & Machy. Corp., New York, N. Y.

### ACCUMULATORS, STEAM.

Waterbury Farrel Fdy. & Mach. Co., Waterbury, Conn.  
Wood & Co., R. D., Philadelphia, Pa.

### ACETYLENE BURNERS.

(See "Burners, Acetylene.")

### ACETYLENE LIGHTS.

Air Reduction Sales Co., New York, N. Y.  
Milburn, Alexander Co., The, Baltimore, Md.

### ACID EGGS, CAST IRON.

- Bethlehem Fdy. & Machine Co., So. Bethlehem, Pa.  
Buffalo Foundry & Machine Co., Buffalo, N. Y.  
Durliron—(acid proof) The Durliron Co., Inc., Dayton, O.  
Imperial—Pratt Engineering & Machine Co., Atlanta, Ga.  
Laidlaw-Dunn-Gordon Co., New York, N. Y.  
Valk & Murdock Co., Charleston, S. C.  
♦ Valley Iron Works, Williamsport, Pa.  
Wheeler Condenser & Engineering Co., Carteret, N. J.

### ADJUSTORS, CORD, ELECTRIC.

American Vulcanized Fibre Co., Wilmington, Del.  
Devlin, J. P., Co., Buffalo, N. Y.  
Innovate—McGill Mfg. Co., Valparaiso, Ind.  
Gund Mfg. Co., La Crosse, Wis.  
Webster—Frank W. Morse, Boston, Mass.

### ADJUSTORS, PACKING.

Weiss—F. G. Weiss, New York, N. Y.

### ADJUSTORS, GRIP, OIL WELL.

Norris, W. C., Tulsa, Okla.

### ADKES.

- American Axe & Tool Co., Glassport, Pa.  
♦ Atha Tool Co., Newark, N. J.  
Black, J. B., Chester, Pa.  
Bradley, G. W., Son (Inc.), Westport, Conn.  
Collins Co., Collinsville, Conn.  
Evansville Tool Wks., Evansville, Ind.  
Hammond, C. & Co., Ogontz, Pa.  
Kelly Axle Mfg. Co., Charleston, W. Va.  
Leetonia Tool Co., The, Leetonia, O.  
Mack Co., Rochester, N. Y.  
♦ Peck, Stow & Wilcox Co., Southington, Conn.  
Plumb, Fayette R., Philadelphia, Pa.  
Romer Axe Co., Dunkirk, N. Y.  
Weston, Thomas B., Baltimore, Md.  
White, L. & I. J., Co., Buffalo, N. Y.

### AERATORS AND DEODORIZERS, WATER.

Jewell Polar Co., Chicago, Ill.

### AGITATORS, SPIRAL.

- Koven, L. O. & Bro., Jersey City, N. J.  
Petroleum Iron Works, Sharon, Pa.  
Smidth, F. L. & Co., New York, N. Y.  
♦ Valley Iron Works, Williamsport, Pa.

**AIR CHAMBERS, HYDRAULIC.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Cook, A. D., Lawrenceburg, Ind.  
 Crane Co., Chicago, Ill.  
 Fee & Mason, New York, N. Y.  
 Hercules—Hercules Float Works, Springfield, Mass.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Koven & Bro., L. O., New York, N. Y.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Malloy, Geo. W., & Sons Co., Buffalo, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne Ind.  
 Perkes, Estate of Charles, Philadelphia, Pa.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Stover Steel Tank Co., Freeport, Ill.  
 Seafie, Wm. E., & Sons Co., Pittsburgh, Pa.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

**AIR CONDITIONING APPARATUS.**

(See also "Humidifiers," "Washers, Air," etc.)

American Warming & Ventilating Co., Elmira, N. Y.  
 Carrier Air Conditioning Co., New York.  
 Economy Pumping Machy. Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kaufman, A. G., Mfg. Co., New York.  
 McCreery Engineering Co., Detroit, Mich.  
 Claflin—C. A. Claflin Co., Boston, Mass.  
 Webster—Warren Webster & Co., Camden, N. J.

**AIR GUNS.**

♦Powell—The Wm. Powell Co., Cincinnati, O.  
 Romort-Romort Mfg. Co., Oakfield, Wis.

**AIR VENT CHAMBERS.**

Stroud, E. H. & Co., Chicago, Ill.

**ALARMS, BOILER RUPTURE.**

Kelly Controller Co., Chicago, Ill.

**ALARMS, FIRE.**

Aero—Aero Alarm Co., New York, N. Y.  
 American Fire Apparatus Co., New York.  
 American Pyrophone—American Chemical Co., Lebanon, Pa.  
 Break Glass—Rope Fire Escape Co., Philadelphia, Pa.  
 Bunnell & Co., J. H., New York, N. Y.  
 Edwards & Co., New York, N. Y.  
 Foamite Firefoam Co., New York, N. Y.

**Foamite  
Firefoam  
Company**  
 Fire Protection Engineers Every  
 200 Fifth Avenue New York City Plant

**AUTOMATIC FIRE  
ALARMS AND  
FIREFOAM  
APPARATUS**

*Complete  
Protection for*

Holtzer-Cabot Electric Co., Roxbury, Boston, Mass.  
 Klaxon—Klaxon Co., Newark, N. J.  
 Loper Fire Alarm Co., Stonington, Conn.  
 McFell Electric Co., Chicago, Ill.  
 Manhattan Fire Alarm Co., New York, N. Y.  
 National Fire Appliance Co., Boston, Mass.  
 Ohio Signal Co., Canton, Ohio.  
 Reiter, G. C., Canton, O.  
 Reliance Instrument Co., Chicago, Ill.  
 Rope Fire Escape Co., Philadelphia, Pa.  
 Samson Electric Co., Canton, Mass.  
 Western Electric Co., Chicago, Ill.  
 Worcester—Union Water Meter Co., Worcester, Mass.

**ALARMS, HIGH AND LOW WATER.**

(See also "Columns, Water.")

Acme—Chicago Engineer Supply Co., Chicago, Ill.  
 Ashcroft—Ashcroft Mfg. Co., The, New York, N. Y.  
 Boston Steam Specialty Co., Boston, Mass.  
 Chicago Automatic Switch Co., Chicago, Ill.  
 ♦Detroit Lubricator Co., Detroit, Mich.  
 Erie—Erie Pump & Equipment Co., Erie, Pa.  
 Garrett, W. D., & Co., New York.  
 Hills-McCanna Co., Chicago, Ill.  
 Industrial Instrument Co., Foxboro, Mass.  
 Jambor—Jambor Mfg. Co., Milwaukee, Wis.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Klaxon—Klaxon Company, Newark, N. J.  
 Lawler's Reliable—Lawler Regulator Co., New York.  
 Leahy, John J., Electrical Supplies, Inc., New York, N. Y.  
 ♦Lunkenhelmer Co., Cincinnati, O.

Neco—Northern Equipment Co., Erie, Pa.  
 ♦Reliance—Reliance Gauge Column Co., The, Cleveland.  
 Safety First—Engineering Co. of Phila., Philadelphia, Penna.  
 Shamrock—John J. Leahy Electrical Supplies, New York, N. Y.  
 Standard Thermometer Co., Boston, Mass.  
 Sund Electric Co., New York, N. Y.  
 U. S.—L. Steigert Co., Cincinnati, O.  
 Vandusen Co., The E. W., Cincinnati, O.  
 ♦Vigilant—Lunkenhelmer Co., The, Cincinnati, O.  
 Williams—The Williams Gauge Co., Pittsburg, Pa.  
 Wright Mfg. Co., Detroit, Mich.

**ALARMS, OIL, TELL-TALE.**

Ruggles-Klingemann Mfg. Co., Salem, Mass.

**ALARMS AND LAMP, TRIP, FOR MINES.**

American Safety Lamp & Mine Supply Co., Scranton, Pa.

**ALIDADES.**

Gurley—W. & L. E. Gurley, Troy, N. Y.

**ALLEVIATORS OR SHOCK ABSORBERS, PIPE LINE.**

Aldrich—Aldrich Pump Co., Allentown, Pa.

**ALLOYS, RESISTANCE.**

Chromel—Hoskins Mfg. Co., Detroit, Mich.

**ALUM, AMMONIA AND POTASH.**

American Smelting & Refining Co., New York.

**ALUMINUM, BAR, INGOT, AND SHEET.**

Aluminum Company of America, Pittsburgh, Pa.  
 Atlantic Iron & Metal Co., Cleveland, O.  
 Bigsby Metal Co., The, Cleveland, O.  
 Birkenstein, S., & Sons, Inc., Chicago, Ill.  
 Bausch Metal Duralumin—Bausch Machine Tool Co., Springfield, Mass.  
 Columbia Smelting & Refining Co., New York, N. Y.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Jannet, Steinmetz & Co., Philadelphia, Pa.  
 Illinois Smelting & Refining Co., Chicago, Ill.  
 Loewenthal Co., Chicago, Ill.  
 Malwurm Aluminum Corp., Pittsburgh, Pa.  
 ♦Michigan Smelting & Refining Co., Detroit, Mich.  
 National Copper Refining Co., Cleveland, O.  
 Palmetto Metal Co., Chicago, Ill.  
 Rebele, L. J., New York.  
 Richards & Co., Inc., Boston, Mass.  
 Sandoval Zinc Co., Chicago, Ill. (cast, sheet, granulated or shot.)  
 United American Metals Corp., Brooklyn, N. Y.  
 U. T. Hungerford Brass & Copper Co., New York.  
 United States Reduction Co., Chicago, Ill. (Ingots & alloys).  
 United Smelting & Aluminum Co., New Haven, Conn.

**ALUMINUM FLUX, SOLDER AND NON-ACID.**

(See also "Solder, Aluminum.")

Allen—L. B. Allen Co., Inc., Chicago, Ill.

**ALUMINUM SULPHATE.**

Foamite Firefoam Co., New York, N. Y.

**AMALGAMATOR.**

Pierce—Mine & Smelter Supply Co., Salt Lake City, Utah.

**ANMMETERS, INDICATING.**

National Gauge & Equipment Co., La Crosse, Wis.  
 Roller-Smith—Roller-Smith Co., New York.

**ANMMETERS, RECORDING.**

Bristol's—The Bristol Co., Waterbury, Conn.  
 Eveready—American Ever Ready Co., Long Island City, N. Y.  
 Hoskins Mfg. Co., Detroit, Mich.  
 Westinghouse Electric & Mfg. Co., Pittsburg, Pa.

**ANCHORS, GUY ROPE.**

Gund Mfg. Co., La Crosse, Wis.

**ANCHORS, PIPE, FLOOR AND WALL.**

Central Station Steam Co., Detroit, Mich.  
 Barrett's—Barrett Sales Co., Chicago, Ill.  
 Tyler Underground Heating System, Pittsburg, Pa.

**ANCHORS, SCREW, EXPANSION.**

Ackerman-Johnson Co., Chicago, Ill.  
 Chicago Expansion Bolt Co., Chicago, Ill.  
 Duplex—The Barrett Sales Co., Chicago, Ill.  
 Norman C. Erwin & Co., Chicago, Ill.  
 Parker Expansion Bolt Co., New York, N. Y.

Rawlplugs—The Rawlplug Co., New York, N. Y.  
 Richmond—Richmond Screw Anchor Co., New York, N. Y.  
 Savage—Savage Expansion Bolt Corp., New York.  
 Sebco—Star Expansion Bolt Co., New York.  
 U. S. E.—United States Expansion Bolt Co., New York, N. Y.  
 Van—Van Expansion Bolt Mfg. Co., Chicago, Ill.

**ANCHORS, SHIP.**

The Thomas Laughlin Co., Portland, Me.

**ANCHOR SPECIALS, FLANGED.**

◆ American District Steam Co., N. Tonawanda, N. Y.

**ANEMOMETERS.**

Davis—Davis Instrument Mfg. Co., Inc., Baltimore, Md.  
 Elliott, B. K., Co., Pittsburg, Pa.  
 Everhart Brass Works, Scranton, Pa.  
 Keuffel & Esser Co., New York.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Queen-Gray Co., Philadelphia, Pa.  
 Schaefer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 S. & M.—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Tagliabue Mfg. Co., Chas. J., New York, N. Y.  
 Tycoos—Taylor Instrument Companies, Rochester, N. Y.  
 Warner Instrument Co., Beloit, Wis.

**ANODES, BRASS, COPPER AND NICKEL.**

Dallas Brass & Copper Co., Chicago, Ill.  
 Detroit Copper & Brass Rolling Mills, Detroit.  
 Eagle Smelting & Refining Works, New York.  
 H. & V. W.—Hanson & Van Winkle Co., Newark, N. J.  
 Hudson Rolling Mill Co., Bloomfield, N. J.  
 Matthews, H. A., Mfg. Co., Seymour, Conn.  
 Michigan Copper & Brass Co., Detroit.  
 Munning, A. P. Co., New York, N. Y.  
 New Haven Copper Co., Seymour, Conn.  
 Ohio Brass & Copper Co., The Cincinnati, Ohio.  
 Rome Brass & Copper Co., Rome, N. Y.  
 Seymour Mfg. Co., Seymour, Conn.  
 Silverite—Zucker & Levett & Loeb Co., New York.  
 U. T. Hungerford Brass & Copper Co., New York.

**ANTIMONY.**

American & Bolivian—Sandoval Zinc Co., Chicago, Ill.  
 Birkenstein, S., & Sons, Inc., Chicago, Ill.  
 Brady Brass Co., Jersey City, N. J.  
 Bruce & Cook, New York, N. Y.  
 Canfield & Sons Co., M. C., Newark, N. J.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Empire Metal Co., Syracuse, N. Y.  
 Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Illinois Smelting & Refining Co., Chicago, Ill.  
 Lehman Bros., Hoboken, N. J.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 North American Copper Co., New York, N. Y.  
 North American Smelting Co., Philadelphia, Pa.  
 Pope Metals Co., Inc., New York.  
 Richards & Co., Inc., Boston, Mass.  
 Selby Smelting & Lead Co., San Francisco, Cal.  
 Swedish Iron & Steel Corp., New York.  
 United American Metals Corp., Brooklyn, N. Y.  
 United States Reduction Co., East Chicago, Ind.  
 United Smelting & Aluminum Co., New Haven, Conn.

**ANVILS.**

American & Peter Wright Patterns—D. H. Potts, Lancaster, Pa.  
 American Hammer—The Columbus Anvil & Forging Co., Columbus, O.  
 American Scale Co., Kansas City, Mo. (Cast iron.)  
 Arm & Hammer—Columbus Anvil & Forgings Co., Columbus, O. (Wrought iron.)  
 Boker Cutlery & Hdw. Co., Inc., New York.  
 Bonney Vise & Tool Co., Allentown, Pa.  
 Bullock Mfg. Associates, Springfield, Mass. (bench)  
 ◆ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
 Columbus Forge & Iron Co., Columbus, O.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 ◆ Disston, Henry, & Sons, Inc., Philadelphia, Pa. (saw makers).  
 ◆ Eagle—Fisher & Norris, Trenton, N. J.  
 Goodell-Pratt Co., Greenfield, Mass. (bench).  
 Hay-Buden Mfg. Co., Brooklyn, N. Y.  
 Hill's—Millers Falls Co., New York, N. Y.  
 Hollands—Hollands Mfg. Co., Erie, Pa.  
 Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Potts, D. H., Co., Lancaster, Pa.  
 ◆ Rock Island Mfg. Co., Rock Island, Ill.  
 Ryerson, Jos. T., & Son, Chicago.  
 Southern Crescent—Southern Skein & Foundry Co., Chattanooga, Tenn.  
 Swedish—Scully Steel & Iron Co., Chicago, Ill.  
 Trenton—Boker Cutlery & Hardware Co., Inc., New York.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.

Vulcan—Illinois Iron & Bolt Co., Carpentersville, Ill.  
 West Steel Casting Co., The, Cleveland, Ohio.  
 Yost—Yost Mfg. Co., Meadville, Pa.

**ANVILS, CHAIN, SAW AND FLOW MAKERS, AND STANDS.**

◆ Atkins, E. C., & Co., Indianapolis, Ind.  
 Fisher & Norris, Trenton, N. J.  
 ◆ Machinery Co. of America, Big Rapids, Mich.

**ANVIL, VISE AND DRILL COMBINED.**

American Scale Co., Kansas City, Mo.  
 Cheney—Fulton Iron Works, Detroit, Mich.  
 Gipsy—Bonney Forge & Tool Works, Allentown, Pa.  
 Millers Falls Co., New York, N. Y.  
 Parker Co., The Charles, Meriden, Conn.  
 Stewart Handy Worker—Chicago Flexible Shaft Co., Chicago, Ill.  
 Trident—Newhall Chain Forge & Iron Co., New York, N. Y.

**APPARATUS, BOILER WASHING AND TESTING.**

Nathan Mfg. Co., New York, N. Y.

**APPARATUS, BREATHING AND LIFE SAVING.**

Elmer, H. N., Chicago, Ill.  
 Gibbs, M. S. A.—Mine Safety Appliance Co., Pittsburgh, Pa.

**APPARATUS, BY-PRODUCT, AND COKE OVEN.**

Western Gas Construction Co., Fort Wayne, Ind.

**APPARATUS, CHEMICAL.**

Badger, E. B., & Sons Co., Boston, Mass.  
 Bethlehem Foundry & Machine Co., Bethlehem, Pa.  
 Buffalo—Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Knott Apparatus Co., L. E., Cambridge, Mass.  
 Scimatco—Scientific Materials Co., Pittsburgh, Pa.

**APPARATUS, DISTILLING.**

Badger, E. B., & Sons Co., Boston, Mass.  
 Griscom-Spencer Co., The, New York, N. Y.  
 Hell, Henry, Chemical Co., St. Louis, Mo.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Jewell Polar Co., Chicago, Ill.  
 Tripure—Standard Water Systems Co., Hampton, N. J.  
 Triumph Ice Machine Co., Cincinnati, O.  
 Vulcan Copper Works, The, Cincinnati, O.  
 Western Gas Construction Co., Fort Wayne, Ind.

**APPARATUS, DIVING.**

Elmer, H. N., Chicago, Ill.  
 Morse, Andrew J. & Son, Inc., Boston, Mass.  
 Schrader Universal—Schrader's, A., Son, Inc., Brooklyn, N. Y.

**APPARATUS, DRYING.**

(See also "Blowers" and "Fans.")

A. B. C.—American Blower Co., Detroit, Mich.  
 Bayley Mfg. Co., Milwaukee, Wis.  
 Buffalo—Buffalo Foundry & Machine Co., The, Buffalo, N. Y.  
 Devine Co., J. P., Buffalo, N. Y.  
 Galland-Henning Mfg. Co., Milwaukee, Wis.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Zimmerman—Blyrayer Iron Works Co., Cincinnati, O.

**APPARATUS, FLAME TEST, FOR MINES.**

Dr. Haldane's—Mine Safety Appliance Co., Pittsburgh, Pa.

**APPARATUS, FORCED DRAFT.**

(See also "Blowers.")

A. B. C.—American Blower Co., Detroit, Mich.  
 Bayley Mfg. Co., Milwaukee, Wis.  
 Balanced Draft—The Engineer Co., New York.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Green Fuel Economizer Co., Beacon, N. Y.  
 Hotchkiss Balanced Draft—Hotchkiss Engineering Corp., Memphis, Tenn.  
 Ilg—Ilg Electric Ventilating Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Lamy, A. & Son, Elizabeth, N. J.  
 New York Blower Co., Chicago, Ill.  
 Sirocco—American Blower Co., Detroit, Mich.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Terry—Terry Steam Turbine Co., Hartford, Ct.  
 Wing—L. J. Wing Mfg. Co., New York, N. Y.

**APPARATUS, GAS ANALYTICAL.**

Griebel Instrument Co., Carbondale, Pa.  
 Hays—Jos. W. Hays Corp., Michigan City, Ind.

- Huyette, The, Paul B. & Co., Inc., Philadelphia, Pa.  
 ♦ Lutz Company, Inc., Philadelphia, Pa.  
 Pierce, The Wm. B. Co., Buffalo, N. Y.  
 Scientific Materials Co., Pittsburgh, Pa.  
 Simonds, G. L., & Co., Chicago, Ill.

#### APPARATUS, HEATING, HOT BLAST.

(See "Blowers" and "Fans.")

#### APPARATUS, HYDROTHERAPEUTIC.

- Clow & Sons, James B., Chicago, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Mott Iron Works, J. L., Trenton, N. J.  
 Wolff Mfg. Co., Chicago, Ill.  
 Sanitarium Equipment Co., Battle Creek, Mich.

#### APPARATUS, INDUCED DRAFT.

- ♦ A B C—Sirocco—American Blower Co., Detroit, Mich.

#### APPARATUS, LABORATORY, TESTING.

- (See also "Testers," "Machines, Testing," Etc.)  
 Griebel Instrument Co., Carbondale, Pa.  
 Howard & Morse, New York, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Knott Apparatus Co., L. E., Cambridge, Mass.

#### APPARATUS, LEAD BURNING.

- Astra—Ashton, Laird & Co., New York, N. Y.  
 Bailey—Bailey-Farrell Mfg. Co., Pittsburgh, Pa.  
 Bermo—Bertschy Engineering Co., Cedar Rapids, Ia.  
 Brooks Machine Co., Wichita, Kan.  
 Buckeye—The Macleod Co., Cincinnati, Ohio.  
 Cox Brass Mfg. Co., Ltd., Albany, N. Y.  
 The Dyer Co., Cambridge, Mass.  
 Economy—Economy Welding & Machine Co., Kansas City, Mo.  
 Prest-O-Lite—Prest-O-Lite Co., Inc., Indianapolis, Ind.  
 Pyrotip—General Electric Co., Schenectady, N. Y.  
 Rego—The Bastian-Blessing Co., Chicago, Ill.  
 Torchweld—Torchweld Equipment Co., Chicago, Ill.  
 Turner—Turner Brass Works, Sycamore, Ill.  
 Waterhouse Welding Co., Boston, Mass.

#### APPARATUS, THREAD INSPECTION.

- Knapp, Arthur, Engineering Corp., New York, N. Y.  
 Seaboldt, B., Corp., New York, N. Y.

#### APPARATUS FOR LEVELING SHAFTING.

- Kinhead Mfg. Co., Boston, Mass.

#### APPARATUS, MINE RESCUE.

- Draeger Oxygen Apparatus Co., The, Pittsburgh, Pa.  
 Salvus—Elmer, H. N., Chicago, Ill.  
 Westfall—S. F. Hayward & Co., New York, N. Y.

#### APPARATUS, OXY-ACETYLENE, CUTTING AND WELDING.

(See "Welding Apparatus.")

#### APPARATUS, OXYGEN, REVIVING.

- Westfall—S. F. Hayward & Co., New York, N. Y.  
 ♦ Columbian Hardware Co., Cleveland, O.

#### APPARATUS, VENTILATING.

(See also "Ventilators.")

- American Warming & Ventilating Co., Elmira, N. Y.  
 Autovent Fan & Blower Co., Chicago, Ill.  
 Buffalo Forge Co., Buffalo, N. Y.  
 ♦ Ohio Body & Blower Co., The, Cleveland, O.

#### APPARATUS, WATER GAS.

- Gas Machinery Co., Cleveland, Ohio.

#### APPLIANCES, SET-UP, FOR MACHINE TOOLS.

- C A D—Standard Shop Equipment Co., Philadelphia, Pa.

#### APRONS, MECHANICS.

- Atlantic Mfg. Co., Wilmington, Del.  
 Boyle, C. A., & Co., Chicago, Ill.  
 California Tanning Co., St. Louis, Mo.  
 Chicago Belting Company, Chicago, Ill.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Dafee-Eustice Co., Detroit, Mich.  
 Excelsior Bag & Mfg. Co., Watervliet, N. Y.  
 Excelsior—H. J. Bartle Mfg. Corp., Troy, N. Y.  
 Ferguson Waterproof Co., St. Louis, Mo.  
 McLanathan, F. W. & Son, Lawrence, Mass.  
 Specialty Mfg. Co., St. Anthony Park, Minn.  
 Troy Carriage Sunshade Co., Troy, O.  
 Walters' Sons, Wm. P., Philadelphia.  
 Wheeler—F. H. Wheeler Mfg. Co., Chicago, Ill.

#### APRONS, TEXTILE.

- Schieren—Chas. A. Schieren & Co., New York, N. Y.

#### ARBORS, DRILL.

- Parker Mfg. Co., Ann Arbor, Mich.

#### AQUAPHONES AND DETECTORPHONES

- Boston Talking Machine Co., Cambridge, Mass.  
 Waterworks Equipment Co., New York, N. Y.

#### ARBORS, GRINDSTONE.

- Hoppen—J. E. Hoppen & Sons, Belleville, N. J.

#### ARBORS, LATHE AND MILLING.

- Almond, T. R., Mfg. Co., Ashburnham, Mass.  
 Aiert Tool Co., Philadelphia, Pa.  
 American Machine Co., Hartford, Conn.  
 American Pneumatic Chuck Co., Chicago, Ill.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buckeye Twist Drill Co., The, Alliance, O.  
 ♦ Cleveland Twist Drill Co., Cleveland, O. (Shell end mill, shell reamer, etc.)  
 Cochran Bly Co., Rochester, N. Y.  
 Detroit Reamer & Tool Co., Detroit, Mich.  
 ♦ Detroit—Detroit Twist Drill Co., Detroit, Mich.  
 Horton—E. Horton & Son Co., Windsor Locks, Conn.  
 Jacobs Mfg. Co., Hartford, Conn.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Parker Mfg. Co., Ann Arbor, Mich.  
 Partridge—E. O. Partridge, Chicago, Ill.  
 Pratt Chuck Co., Frankfort, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 ♦ Skinner Chuck Co., New Britain, Conn.  
 ♦ Standard Tool Co., The, Cleveland, O.  
 Union Mfg. Co., New Britain, Conn.  
 ♦ Union Twist Drill Co., Athol, Mass.  
 Wilmarth & Morman Co., Grand Rapids, Mich.  
 ♦ W. B.—Whitman & Barnes Mfg. Co., Akron, O.

#### ARBORS, SAW.

- ♦ American Saw Mill Machinery Co., Hackettstown, N. J.  
 ♦ Atkins & Co., E. C., Indianapolis, Ind.  
 Beach—Beach Mfg. Co., Montrose, Pa.  
 Badger—Badger Gas & Gasoline Engine Co., Kansas City, Kans.  
 ♦ Disston & Son, Henry, Philadelphia, Pa.  
 Erie Forge Co., Erie, Pa.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 Southern Saw Works, Atlanta, Ga.  
 Welch, T. F., & Co., Boston, Mass.

#### ARCHES, BOILER.

- Brady Foundry Co., James A., Chicago, Ill.  
 Budd—The Budd Grate Co., Philadelphia, Pa.  
 Detrick—M. H. Detrick Co., Chicago, Ill.  
 Fox's, Geo., Sons, New York, N. Y.  
 Killemul—Kileyley & Mueller, New York, N. Y.  
 McLeod & Henry Co., Troy, N. Y.  
 Maurer & Son, Henry, Maurer, N. J.  
 Monarch—Monarch Boiler Arch Co., Milwaukee, Wis.  
 National & Shelby—National Tube Co., Pittsburgh, Pa.

- Presbrey Stove Lining Co., Taunton, Mass.

#### ARCHES, STOKER.

- Green Engineering Co., East Chicago, Ind.

#### ARCS, STADIA.

- Beaman—W. & L. E. Gurley, Troy, N. Y.

#### ARMS, SHOWER.

- Curtainless Shower Co., New York.

#### ARMS, SODA DRAUGHT.

- Bishop & Babcock Co., The, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.

#### ARMS, FLEXIBLE METAL.

- Almond—T. R. Almond Mfg. Co., Ashburnham, Mass.  
 A-Metal-Hose—The American Metal Hose Co., Waterbury, Conn.  
 Breeze Mfg. Co., Newark, N. J.

#### ARRESTERS, DUST.

- American—American Foundry Equipment Co., New York.  
 Bicalky Fan Co., Buffalo, N. Y.  
 Hersh Brothers Co., Allentown, Pa.  
 Macleod Co., The, Cincinnati, O.  
 Pangborn—Pangborn Corp., Hagerstown, Md.  
 Sly—W. W. Sly Mfg. Co., Cleveland, O.

#### ARRESTERS, SPARK.

- Barbee Wire & Iron Works, Chicago, Ill.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Eatey Wire Works Co., New York, N. Y.  
 Glafke—Loggers Oil Equipment Co., Portland, Ore.



McKinnon Boiler & Machine Co., Bay City, Mich.  
 Paxson Co., J. W., Philadelphia, Pa.  
 Port Huron Engine & Thresher Co., Port Huron, Mich.  
 Sharpless & Watt Co., Philadelphia, Pa. (fireplace).  
 Smith Wire & Iron Works, Chicago, Ill.  
 Tyler, W. S., Co., Cleveland, O.  
 Wright Wire Co., Worcester, Mass.

**ARSENIC.**

American Smelting & Refining Co., New York.

**ASBESTOS, CRUDE AND FIBRE.**

Asbestos & Mineral Corp., New York City.  
 Bermudez-Barber Asphalt Paving Co., Philadelphia, Pa.

**ASBESTOS, SHEETS, CORRUGATED.**

Keasbey & Mattison Co., Ambler, Pa.

**ASPHALT, REFINED.**

Astek—The U. S. Asphalt Refining Co., New York.  
 Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Carey—Philip Carey Mfg. Co., Lockland, Cincinnati, O.  
 National Roofing Co., Tonawanda, N. Y.  
 Supreme—Gulf Refining Co., Pittsburgh, Pa.  
 Trinidad—Barber Asphalt Paving Co., Philadelphia, Pa.  
 Vulcanite—Barber Asphalt Paving Co., Philadelphia.  
 Warren Chemical Div., The Barrett Co., New York.  
 Watson, H. F., Erie, Pa.

**ASPHALT ROOFING, BUILT-UP.**

Aspromet—H. H. Robertson Co., Pittsburgh, Pa.  
 McHenry—Millhouse Mfg. Co., South Bend, Ind.  
 Pathfinder—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Trinidad—Barber Asphalt Paving Co., Philadelphia, Pa.  
 Warren Chemical & Mfg. Div., The Barrett Co., New York.

**ASSEMBLERS.**

M. E. C.—Manufacturers Equipment Co., Chicago, Ill.  
 Nelson Tool Co., Inc., New York, N. Y.

**ATOMIZERS, FUEL OIL.**

(See "Burners, Fuel Oil.")

Anthony—The Anthony Co., Long Island City, N. Y.  
 Billow—National Supply Co., Chicago, Ill.  
 Sandusky Fdy. & Machine Co., The, Sandusky, O.

**ATTACHMENTS, BALL TURNING, FILING, TAPER TURNING AND THREADING.**

Pratt & Whitney Co., Hartford, Conn.

**ATTACHMENTS, BORING TOOL.**

♦ Champion—Western Tool & Mfg. Co., Springfield, O.  
 ♦ Williams, J. H. & Co., Brooklyn, N. Y.

**ATTACHMENTS, AUTOMATIC, FOR PRESSES.**

Baird Machine Co., The, Bridgeport, Conn.

**ATTACHMENTS, DRILLING.**

Fortin Turret Head—Spafford Tool Works, Hartford, Conn.  
 Hjorth Lathe & Tool Co., Boston, Mass. (Submerged.)  
 Niles-Bement-Pond Co., New York, N. Y.  
 Prentiss Vise Co., New York, N. Y.  
 Reed Co., Francis, Worcester, Mass.  
 Reliable—Dikeman Mfg. Co., South Norwalk, Conn.  
 Robinson, M. W., Co., New York, N. Y.  
 Shepard—Prentiss Vise Co., New York, N. Y.  
 ♦ Wizard—McCrosky Tool Corp., The, Meadville, Pa.

**ATTACHMENTS, FLUE RECLAIMING.**

Draper Mfg. Co., Port Huron, Mich.

**ATTACHMENTS, GEAR CUTTING.**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 South Bend Lathe Works, South Bend, Ind.  
 Young Machine & Tool Co., New York, N. Y.

**ATTACHMENTS, GRINDING.**

American—Diamond Machine Co., Providence, R. I.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati-Bickford Tool Co., Oakley, O.  
 Cincinnati Milling Machine Co., The, Cincinnati, O.  
 Elgin Tool Co., The, Elgin, Ill.  
 Harris—H. Harris Engineering Co., Bridgeport, Conn.  
 Keystone Grinder & Mfg. Co., Pittsburgh, Pa. (For grinding adzes, drills, flat bits, pipe dies, scythes and saws.)

Niles-Bement-Pond Co., New York, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 Precision & Thread Grinder Mfg. Co., Philadelphia, Pa.  
 Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
 South Bend Lathe Works, South Bend, Ind.  
 Webster & Perks Tool Co., Springfield, O.  
 Woods Engineering Co., The, Alliance, O.

**ATTACHMENTS, JOINTER.**

Jackson & Church Co., Saginaw, Mich.

**ATTACHMENTS, LATHE.**

American Tool & Machine Co., Boston, Mass.  
 Bradford Machine Tool Co., Cincinnati, Ohio.  
 Cincinnati Lathe & Tool Co., Cincinnati, O.  
 ♦ Curtis—The Curtis & Curtis Co., Bridgeport, Conn.  
 Hopkins—A. E. Hopkins, Middletown, N. Y.  
 Lathes—The Rahn-Larmon Co., Cincinnati, O.  
 Newman Mfg. Co., Cincinnati, Ohio.  
 Niles-Bement-Pond Co., New York, N. Y.  
 P. & W.—Pratt & Whitney Co., Hartford, Conn.  
 Paschall Tool Co., Long Beach, Calif.  
 Phoenix Turret—Phoenix Mfg. Co., Eau Claire, Wis.  
 Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
 Stark Tool Co., Waltham, Mass.  
 Stewart, A. R., Nashville, Tenn.  
 Williams, J. H. & Co., Brooklyn, N. Y.  
 Woods Engineering Co., The, Alliance, O.

**ATTACHMENTS, LATHE, CYLINDER BORING.**

(See also "Machines, Cylinder Boring.")

South Bend Lathe Works, South Bend, Ind.  
 Woods Engineering Co., The, Alliance, Ohio.  
 ♦ Williams, J. H. & Co., Brooklyn, N. Y.

**ATTACHMENTS, LATHE KEY SEAT.**

South Bend Lathe Works, South Bend, Ind.

**ATTACHMENTS OR FIXTURES, MILLING.**

Barnes, W. F. & John, Co., Rockford, Ill.  
 Becker Milling Machine Co., Hyde Park, Mass.  
 ♦ Browne & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Milling Machine Co., The, Cincinnati, O.  
 Cleveland Milling Machine Co., Cleveland, O.  
 Davis—Hinckley Machine Works, The, Hinckley, Ill. (for drill press).  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Elgin Tool Works, The, Elgin, Ill.  
 Farwell—The Adams Co., Dubuque, Ia. (for planers).  
 Garvin Machine Co., New York, N. Y.  
 Hendey Machine Co., Torrington, Conn.  
 Horton—E. Horton & Son Co., Windsor Locks, Conn.  
 Ingersoll Milling Machine Co., Rockford, Ill.  
 Kempamith—The Kempamith Mfg. Co., Milwaukee.  
 Krasberg Mfg. Co., Chicago, Ill.  
 LeBlond, R. K., Machine Tool Co., Cincinnati, O.  
 Milwaukee—Kearney & Trecker Corp., Milwaukee, Wis.  
 National Engineering & Tool Works, Oak Park, Ill.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oesterlein Machine Co., Cincinnati, O.  
 Owen Machine Tool Co., Springfield, O.  
 Porter—Cable Machine Co., Syracuse, N. Y. (Vertical.)  
 Pratt & Whitney Co., Hartford, Conn.  
 Rivett Lathe Mfg. Co., Boston, Mass.  
 Rockford Milling Machine Co., Rockford, Ill.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
 Shepard—Shepard Lathe Co., Rising Sun, Ind.  
 South Bend Lathe Works, South Bend, Ind.  
 Up-to-Date Tool Co., Boston 18, Mass.  
 Whitney Mfg. Co., Hartford, Conn.  
 Young—The Young Machine & Tool Co., New York.

**ATTACHMENTS, RACK CUTTING AND INDEXING.**

Rockford Milling Machine Co., Rockford, Ill.

**ATTACHMENTS, RATCHET.**

♦ Armstrong Mfg. Co., Bridgeport, Conn.

**ATTACHMENTS, SHAPING, FOR SHAFT HANGERS.**

♦ Chicago Pulley & Shafting Co., Chicago, Ill.

**ATTACHMENTS, SHAPER.**

Smith & Mills Co., The, Cincinnati, O.  
 Stockbridge Machine Co., Worcester, Mass.

**ATTACHMENTS, SLOTTING.**

Bruno—H. A. Moore Co., Rochester, N. Y.

**ATTACHMENTS, TAPER.**

Walcott Lathe Co., Jackson, Mich.

**ATTACHMENTS, TAPPING.**

Dorman—Dorman, John H., New York, N. Y.  
 Eastern Tube & Tool Co., Inc., Brooklyn, N. Y.

Hoefer Mfg. Co., Freeport, Ill.  
Jarvis—Charles L. Jarvis Co., The. Gildersleeve, Conn.

Modern—Modern Tool Co., Erie, Pa.  
Niles-Bement-Pond Co., New York, N. Y.  
Pratt & Whitney Co., Hartford, Conn.  
Proconier Line—Wm. L. Proconier, Chicago, Ill.  
Wahlstrom Tapper—Wahlstrom Tool Co., Brooklyn, N. Y.

♦ Wizard—McCrosky Tool Corp., The, Meadville, Pa.  
Woodstock—Peter Bros. Mfg. Co., Algonquin, Ill.

#### **ATTACHMENTS, VISE, ADJUSTABLE TAPER.**

Athol Machine & Foundry Co., Athol, Mass.

#### **AUGER BIT FILES.**

♦ Delta File Wks., Philadelphia, Pa.

#### **AUGERS, BREAST AND MACHINE.**

Salem Tool Co., Salem, Ohio.

#### **AUGERS, COAL, POWER.**

Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.  
Hardsoeg, Martin, Co., Pittsburgh, Pa.

#### **AUGERS AND DIGGERS, POST HOLE.**

American Well Works, Aurora, Ill.  
Anderson Forge & Machine Co., Detroit, Mich.  
Automatic—Gustave Peck Foundry & Mfg. Co., Le Mars, Ia.

Baldwin—Baldwin Tool Works, Parkersburg, W. Va.  
Cook, A. D., Lawrenceburg, Ind.  
Fenn—The Fenn Mfg. Co., Charlotte, Mich.  
Hall—Hall Mfg. Co., Cedar Rapids, Ia.  
Hawkeye Mfg. Co., Waterloo, Iowa.  
Iron City Tool Co., Pittsburgh, Pa.  
Iwan—Iwan Bros., South Bend, Ind.  
Klein & Sons, Mathias, Chicago, Ill.  
Klein-Logan Co., The, Pittsburgh, Pa.  
Monitor—Gus Pech Foundry & Mfg. Co., Le Mars, Ia.  
♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
Standard Auger Co., Chicago, Ill.  
Star—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
Vaughan—Iwan Bros., South Bend, Ind.  
Warwood—Warwood Tool Co., Wheeling, W. Va.

#### **AUGERS, GASFITTERS.**

Bernz Co., Otto, Newark, N. J.  
Crane Co., Chicago, Ill.

#### **AUGERS, HOLLOW.**

Buckeye Vise Co., Cleveland, O.  
Hargraves—The Cincinnati Tool Co., Cincinnati, O.  
Millers Falls Co., Millers Falls, Mass.  
Phoenix Hardware Mfg. Co., Homer, N. Y.  
Southington Mfg. Co., Southington, Conn.  
Stearns & Co., E. C., Syracuse, N. Y.  
James Swan Co., Seymour, Conn.  
Wood & Sons Co., A. A., Atlanta, Ga.

#### **AUGERS, RAFTING AND HUT.**

Jackson—Jackson Mfg. Co., Jackson, O.

#### **AUGERS, SHIP.**

Greenlee Reliance—Greenlee Bros., & Co., Rockford, Ill.  
Jennings, C. E. & Co., New York, N. Y.  
Millers Falls Co., Millers Falls, Mass.  
Snell Mfg. Co., Fiskdale, Mass.  
Star Bit & Tool Co., Rockford, Ill.

## **Everything in Plumbing Tools**

Largest Variety in the World  
Manufacturers and Jobbers  
Write for catalog.

**B. B. SPECIALTY CO., Pittsburgh, Pa.**

#### **AUGERS, WATER CLOSET, PIPE AND SEWER.**

Burke—B. B. Specialty Co., Pittsburgh, Pa.  
C. & B.—Cashman & Benner, Harrisburg, Pa.  
Coleman's—Allan J. Coleman, Chicago, Ill.  
Crane Co., Chicago, Ill.  
Duplex—Duplex Mfg. Co., Philadelphia, Pa.  
Hause—Chas. F. Hause Mfg. Co., Inc., Omaha, Neb.  
Taiz, Jacob & Son, Philadelphia, Pa.  
Wrigley's Patent—Samuel Lewis, New York, N. Y.  
W. W.—Woodward-Wanger Co., Philadelphia, Pa.

#### **AUGERS, WELL.**

American Well Works, Aurora, Ill.  
Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.

Monitor—Gustave Pech Fdy. & Mfg. Co., Le Mars, Ia.  
Oil Well Supply Co., Pittsburg, Pa.  
Southern Engine & Boiler Co., Jackson, Tenn.  
Star Drilling Machine Co., Akron, O.

#### **AUGERS, WOOD BORING.**

(See "Bits, Auger.")  
Kellogg Co., M. W., New York, N. Y.

#### **AUTOCLAVES.**

Simmons Pipe Bending Works, Newark, N. J.  
♦ Valley Iron Works, Williamsport, Pa.

#### **AUTOMOBILE INSTRUMENTS.**

National Gauge & Equipment Co., La Crosse, Wis.

#### **AUTOMOBILE SPECIALTIES.**

Simonizing Products—Simons Mfg. Co., Chicago, Ill.  
(Simoniz Kleener, top dressing, road tar remover, enamel, leather dressing, fabric cleaner, penetrating oil and brake juice.)

#### **AWLS, BELT.**

Buck Bros., Millbury, Mass.  
♦ Lathrop's—Greene, Tweed & Co., New York, N. Y.  
Lathrop Patent—Manufacturer's Belt Hook Co., Chicago.  
Tuck—Tuck Mfg. Co., Brockton, Mass.

#### **AWLS, BRAD.**

Buck Bros., Millbury, Mass.  
Bullock Mfg. Associates, Springfield, Mass.  
Hargrave's—The Cincinnati Tool Co., Cincinnati, O.  
Tuck—Tuck Mfg. Co., Brockton, Mass.

#### **AWLS, SCRATCH.**

Bemis & Call Hardware & Tool Co., Springfield, Mass.  
♦ Billings & Spencer Co., Hartford, Conn.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Buck Bros., Millbury, Mass.  
Buffum Tool Co., Louisiana, Mo.  
Bullock Mfg. Associates, Springfield, Mass.  
C-S Co.—Chapin-Stephens Co., Pine Meadow, Conn.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.  
Millers Falls Co., New York, N. Y.

#### **BAG FILLING AND TYING EQUIPMENT.**

Bates System—Bates Valve Bag Co., Chicago, Ill.  
Mound—Mound Tool Co., St. Louis, Mo.  
♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
S. & I. Co., The, Springfield, Mass.  
Stanley Rule & Level Co., New Britain, Conn.  
Sterling—The Southington Mfg. Co., Southington, Conn.  
Swan Co., James, Seymour, Conn.

#### **AXES AND HATCHETS.**

Alsteel—Boker Cutlery & Hdwe. Co., Inc., New York.  
American Axe & Tool Co., Glassport, Pa.  
Arcade Mfg. Co., Freeport, Ill.  
Bradley's Sons, G. W., Westport, Conn.  
Bur-Nor Scout—Burgess-Norton Mfg. Co., Geneva, Ill.  
Clipper—Clipper Tool Co., Buffalo, N. Y.  
D. R. Barton—Mack & Co., Rochester, N. Y. (Broad axes.)  
Gray Iron Foundry Co., Reading, Pa.  
G. T. W.—Griffith Tool Wks., Philadelphia, Pa.  
Hammond, C. & Son, Ogontz, Pa.  
Kelly Axe Mfg. Co., Charleston, W. Va.  
Leetonia Tool Co., The, Leetonia, O.  
Mack Company, Rochester, N. Y.  
Mann, James H. Co., Lewistown, Pa.  
Mann Edge Tool Co., Lewistown, Pa. Trade names, American Volunteer, Bald Eagle, Buck Horn, Colonial Gold Bond, Indian Chief, Jack Frost, Knot Clipper, Old Glory, Old Honesty, Red Top, True American.  
Peck, Stow & Wilcox Co., The, Southington, Conn.  
Perfect Handle—The H. D. Smith & Co., Plantsville, Conn.  
Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
♦ Plumb—Frvette R. Plumb, Inc., Philadelphia, Pa.  
Rex Fire Appliance Co., New York.  
Romer Axe Co., Dunkirk, N. Y.  
Royal Chinoak—L. G. Isaacson Co., Inc., Aberdeen, Wash.  
Sayre, L. A., & Sons, Newark, N. J.  
Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
Warren Axe & Tool Co., Warren, Pa.  
White Co., L. & I. J., Buffalo, N. Y.

#### **AXES, FIREMEN'S.**

American Axe & Tool Co., Glassport, Pa.  
Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.

Cliff & Guilbert Co., New York, N. Y.  
 Evansville Tool Co., Evansville, Ind.  
 Kelly Axe & Tool Co., Highland Park, Ky.  
 Mann Edge Tool Co., Lewistown, Pa.  
 Safety Fire Extinguisher Co., New York, N. Y.  
 Warren Axe & Tool Co., Warren, Pa.  
 White, L. & I. J., Co., Buffalo, N. Y.

**AXLES.**

Electric Wheel Co., Quincy, Ill.  
 Empire Mfg. Co., Quincy, Ill.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Southern Skein & Foundry Co., Chattanooga, Tenn.  
 Tioga Steel & Iron Co., Philadelphia, Pa. (Locomotive.)

**AZIMUTH INSTRUMENTS.**

Hand, John F., & Sons Co., Philadelphia, Pa.

**BACKS AND FRONTS, WATER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Herbert Boiler Co., The, Chicago, Ill.  
 Hessler Co., H. E., Syracuse, N. Y.  
 North Star Foundry Co., Minneapolis, Minn.  
 Quaker Mfg. Co., Chicago, Ill.

**BACKS, SINK, CAST IRON.**

(See "Sinks, Cast Iron.")

**BACKS, SINK, GLASS.**

Novus—The Penn-American Plate Glass Co., Alexandria, Ind.

**BACKS, SINK, PETRIUM.**

Petrium Sanitary Sink Co., Berkeley, Calif.

**BACKS, SINK, PORCELAIN AND PORCELAIN ENAMELED.**

(See "Sinks, Porcelain Enameled.")

**BADGES, WORKMEN'S.**

Auld, D. L. Co., The, Columbus, Ohio.  
 Cruver Mfg. Co., Chicago, Ill.  
 Matthews & Co., Jas. H., Pittsburgh, Pa.  
 Pittsburgh Stamp Co., Inc., Pittsburgh, Pa.

**BAFFLES, BOILER.**

Botfield Specialties Mfg. Co., Philadelphia, Pa.  
 Turner Baffle Wall—Engineer Co., The, New York N. Y.

**BAGS AND BASKETS, CANVAS.**

Carpenter & Co., Geo. B., Chicago, Ill.  
 Converse—Converse, F. S., Co., Inc., Johnson City, N. Y.  
 Daffoe-Bustice Co., Detroit, Mich.  
 Lane—W. T. Lane & Bro., Poughkeepsie, N. Y.  
 Lansing Co., Lansing, Mich.  
 Morris Duck—Morris & Co., Inc., Groveville, N. J.  
 Sackett, Screen & Chute Co., Chicago, Ill.

**BAGS AND CASES, MECHANICS' TOOL.**

Aschenbach, Henry, Harness Co., New York.  
 B. B.—B. B. Specialty Co., Pittsburgh, Pa.  
 Bernz Co., Otto, Newark, N. J.  
 Crane Co., Chicago, Ill.  
 Hartford—R. M. Starbuck & Sons, Hartford, Conn.  
 Johnson, Wm., Newark, N. J.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
 Western Union—Galewski, A., New York, N. Y.

**BAGS, NITRATE OF SODA AND MISCELLANEOUS.**

♦ By-Products Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

**BAGS, RUBBER, GAS ENGINE.**

Endurance—Behringer, Edward A., New York.  
 Hodgman Rubber Co., Tuckahoe, N. Y.  
 ♦ Mechanical Rubber Co., Cleveland, O.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ New Jersey Car Spring & Rubber Co., Jersey City, N. J.

**BAGS, RUBBER, GAS MAIN.**

Endurance—Behringer, Edward A., New York.  
 ♦ Goodrich, B. F., Rubber Co., The, Akron, O.  
 Hodgman Rubber Co., Tuckahoe, N. Y.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 Schultz—Osgood Sayne, Philadelphia, Pa.

**BAGS, TAMPING.**

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

**BAILOKS, OIL WELL.**

Spang—Spang & Co., Butler, Pa.

**BAKELITE, CONDENSITE AND REDMANOL MOULDING.**

National Lead Co., New York, N. Y.

**BALANCES, KNIFE.**

Oliver—Oliver Machinery Co., Grand Rapids, Mich.

**BALANCES, TORSION.**

Roller-Smith Co., New York.

**BALANCING WAYS, FOR PULLEYS, MOTORS, ETC.**

Anderson Bros. Mfg. Co., Rockford, Ill.  
 Bowsher, N. F., & Co., The, South Bend, Ill.  
 Defiance Machine Works, Defiance, O.

**BALERS.**

(See "Presses, Baling.")

**BALERS, SACK.**

Handy—Handy Sack Baler Co., Cedar Rapids, Ia.  
 Rowe Mfg. Co., Galesburg, Ill.  
 White, T. G., Cedar Rapids, Ia.

**BALCOCKS.**

(See "Cocks, Ball.")

**BALL RETAINERS.**

Star—Bearings Co. of America, Lancaster, Pa.

**BALLS, BRASS OR BRONZE.**

Atlas—Atlas Ball Co., Philadelphia, Pa.  
 Chicago Well Supply Co., Chicago, Ill.  
 Draper—Draper Mfg. Co., The, Port Huron, Mich.  
 Excelsior Steel Ball Co., Buffalo, N. Y.  
 Hoover—Hoover Steel Ball Co., Ann Arbor, Mich.  
 No-Corod—Standard Roller Bearing Co., Philadelphia, Pa.  
 Pressed Steel Mfg. Co., Philadelphia, Pa.

**BALLS, CEMENT MILL.**

Fuller-Lehigh Co., Fullerton, Pa.

**BALLS, CHECK VALVE.**

♦ Lunkenhelmer Co., Cincinnati, O.

**BALLS, COPPER.**

(See "Floats, Copper.")

Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Harris, Arthur & Co., Chicago, Ill.  
 Haydenville Co., Haydenville, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.

**BALLS, CRUSHING AND GRINDING.**

United Alloy Steel Corp., Canton, O.

**BALLS, FULLER, FOR BIRDS AND COCKS.**

Bell—Andrew Bell, Newark, N. J.  
 Butterworth—Butterworth Supply Co., Philadelphia, Pa.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 ♦ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Crane Co., Chicago, Ill.  
 Diamond Rubber Co., Inc., The, Akron, O.  
 Durst Mfg. Co., New York, N. Y.  
 Enduro—Woodward-Wanger Co., Philadelphia, Pa.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Frank Bros., New York, N. Y.  
 Good—Good Mfg. Co., Inc., New York.  
 Goodrich Rubber Co., The B. F., Akron, O.  
 Helland Graphite—Garrison Brass & Machine Works, New York, N. Y.  
 Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
 ♦ Jenkins—Jenkins Bros., New York, N. Y.  
 ♦ Mechanical Rubber Co., The, Cleveland, O.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Perfect—H. O. Canfield Co., Bridgeport, Conn.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Republic Rubber Corp., The, Youngstown, O.  
 Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.

**BALLS AND SEATS, OIL WELL, VALVE.**

Bronzex, Steelex—The Chas. N. Hough Mfg. Co., Franklin, Pa.

**BALLS AND FLOATS, CLOSET TANK FLUSHING VALVE, RUBBER AND COPPER.**

American Pin Co., Waterbury, Conn.  
 Baker's Special—Baker Specialty & Supply Co., Logansport, Ind.  
 Bozeman—Bozeman Mfg. Co., Baltimore, Md.  
 Bower—The Monarch Brass Co., Cleveland, O.  
 Butterworth—Butterworth Supply Co., Philadelphia, Pa.

- Canfield Co., The H. O., Bridgeport, Conn.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Chicago—Mechanical Rubber Co., Chicago, Ill.  
 Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦Cleveland, Meruco—Mechanical Rubber Co., Cleveland, Ohio.  
 Crane Co., Chicago, Ill.  
 Durst Mfg. Co., New York, N. Y.  
 Eastern Specialty Mfg. Co., Scranton, Pa.  
 Enduro—Woodward-Wanger Co., Philadelphia, Pa.  
 Essex Rubber Co., Trenton, N. J.  
 Frank Bros., New York, N. Y.  
 Good—Good Mfg. Co., New York, N. Y.  
 ♦Goodrich—The B. F. Goodrich Rubber Co., Akron, O.  
 Hajo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Holland Rubber Co., New York, N. Y.  
 Meruco—Mechanical Rubber Co., The, Cleveland, O.  
 "Naugatuck Seamless"—Naugatuck Mfg. Co., Naugatuck, Conn.  
 New Jersey Tube Co., New York.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Parabal—Woodward-Wanger Co., Philadelphia, Pa.  
 Perfect—American Fin Co., Waterbury, Conn.  
 Pfau-Pfau Mfg. Co., The, Cincinnati, O.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Relvo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 ♦Republic Rubber Corp., The, Youngstown, O.  
 ♦Rome Ball—Rome Sanitary Co., Rome, N. Y.  
 ♦Seat-Tite—United States Rubber Co., Mechanical Goods Div., New York.  
 The Diamond Rubber Co., Akron, O.  
 Thermo—M. Glauber & Co., New York, N. Y.  
 Tip-Top—Western Kieley Steam Specialty Co., Chicago, Ill.  
 ♦Triumph—New York Rubber Co., New York, N. Y.  
 Union—Union Sanitary Supply Co., Union City, Ind.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Weber Bros. Metal Works, Chicago, Ill.  
 Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Wonder Brand—American Fin Co., Waterbury, Conn.

#### BALLS, RUBBER, FOR STEAM PUMPS, ETC.

- ♦New York Belting & Packing Co., New York, N. Y.

#### BALLS, STEEL.

(See also "Bearings, Ball.")

- Abbott—Abbott Ball Co., Hartford, Conn. (burnishing).  
 American Ball Bearing Co., Cleveland, O.  
 American—American Ball Co., Providence, R. I.  
 ♦Bethlehem Steel Co., Bethlehem, Pa. (Crusher.)  
 Excelsior Steel Ball Co., Buffalo, N. Y.  
 F. & S.—The J. S. Bretz Co., New York.  
 Globe—Globe Machine & Stamping Co., Cleveland, O.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 High Duty—Standard Roller Bearing Co., Philadelphia, Pa.  
 Micro-Chrome—Hoover Steel Ball Co., Ann Arbor, Mich.  
 New Departure Mfg. Co., Bristol, Conn.  
 New York Bearings Co., New York, N. Y.  
 Pressed Steel Mfg. Co., Philadelphia, Pa.  
 S K F Industries, Inc., New York.  
 Standard Chrome, Alloy—Standard Steel & Bearings, Inc., Philadelphia, Pa.  
 Tioga Steel & Iron Co., Philadelphia, Pa. (Crusher.)

#### BANDING, TEXTILE.

- Lambeth Rope Corp., New Bradford, Mass.

#### BANDS, BAND SAW.

- ♦Atkins, E. C., & Co., Indianapolis, Ind.  
 ♦Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Continental Rubber Works, Erie, Pa.  
 ♦Diamond Rubber Co., The, Akron, O.  
 ♦Goodrich—B. F. Goodrich Rubber Co., Akron, O.  
 Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦Mechanical Rubber Co., Cleveland, O.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 Pioneer Rubber Mills, San Francisco, Calif.  
 Revere Rubber Co., Chelsea, Mass.

#### BANDS, HOSE.

(See "Clamps, Hose.")

#### BANDS, ROTATING, COPPER.

- Kilbourne & Jacobs Mfg. Co., Columbus, O.

#### BANDS, SHINGLE, STEEL.

- Acme Steel Goods Co., Chicago, Ill.

#### BANDS, STEEL.

- Adams—The Adams Co., Dubuque, Ia.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 ♦Pittsburgh Steel Co., Pittsburgh, Pa.  
 Scully Steel & Iron Co., Chicago, Ill.

#### BANDS AND TIRES, RUBBER.

- ♦Boston Belting Co., Boston, Mass.

- Continental Rubber Works, Erie, Pa.  
 Diamond Rubber Co., The, Akron, O.  
 Elastic Tip Co., Boston, Mass.  
 ♦Mechanical Rubber Co., Cleveland, O.  
 Pennsylvania Rubber Co., Jeanette, Pa.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Springfield Tire & Rubber Co., The, Springfield, O.

#### BANDS AND TIRES, WHEEL.

- ♦New York Belting & Packing Co., New York, N. Y.

#### BARBED WIRE.

- ♦Buckeye and Mahoning—Youngstown Sheet & Tube Co., Youngstown, Ohio.

#### BARN EQUIPMENT, SANITARY.

- Hunt, Helm & Ferris Co., Harvard, Ill. (drinking bowls).  
 James Mfg. Co., Fort Atkinson, Wis.

#### BAROMETERS.

- Elliot, B. K. Co., Pittsburg, Pa.  
 Keuffel & Esser Co., New York, N. Y.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Queen & Co., Philadelphia, Pa.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Tagliabue, C. J., Mfg. Co., Brooklyn, N. Y. Trade names—Tag, Simplex, Perfect, Faultless, Self-operating, Compound, and Combination.  
 Tagliabue, G. Estate of, New York, N. Y.  
 Tycos—Taylor Instrument Co.'s, Rochester, N. Y.  
 Watertown Thermometer Co., Watertown, N. Y.  
 Weinhausen & Hespe, New York.

#### BARRELS, BALL BURNISHING.

- Abbott Ball Co., Hartford, Conn.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Globe Machine & Stamping Co., Cleveland, O.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Henderson Bros. Co., The, Waterbury, Conn.  
 Munning, A. P., & Co., New York, N. Y.

#### BARRELS, SAND BLAST.

- Hoevel Mfg. Corp., Jersey City, N. J.  
 Mott Sand Blast Mfg. Co., Inc., Chicago, Ill.  
 New Haven Sand Blast Co., New Haven, Conn.  
 Pangborn Corp., Hagerstown, Md.

#### BARRELS, SHOP.

- Detroit Range Boiler & Steel Barrel Co., Detroit, Mich.  
 The Welded Steel Barrel Corp., Detroit, Mich.

#### BARRELS, STEAM DRYING.

- Baird—The Baird Machine Co., Bridgeport, Conn.  
 Columbian Boiler Co., The, Columbian, O.

#### BARRELS OR DRUMS, STEEL.

- Benco—Wilson & Bennett Mfg. Co., Chicago, Ill.  
 Brooklyn Range Boiler Co., Long Island City, N. Y.  
 Cleveland Wire Spring Co., The, Cleveland, O.  
 Cleveland Steel Barrel Co., Cleveland, Ohio.  
 Columbian Boiler Co., The, Columbian, O.  
 Draper Mfg. Co., Cleveland, O.  
 Duluth Corrugating & Roofing Co., Duluth, Minn.  
 Federal Pressed Steel Co., Milwaukee, Wis.  
 Gem, Presteel—Petroleum Iron Works Co., Sharon, Pa.  
 Hackney—Pressed Steel Tank Co., Milwaukee, Wis.  
 Kilbourne & Jacobs Mfg. Co., The, Columbus, O.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Meurer Steel Barrel Co., Inc., New York, N. Y.  
 Mullins Body Corp., Stamping Dept., A. Salem, O.  
 Nesco—National Stamping & Enameling Co., Inc., New York, N. Y.  
 Ohio Mfg. Co., The, Painesville, O.  
 Perfect—Detroit Range Boiler Co., Detroit, Mich.  
 Republic Steel Package Co., Cleveland, O.  
 Seale, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Steel Barrel Co. of America, New York, N. Y.  
 Trageser, John, Steam Copper Works, New York, N. Y.  
 Welded Steel Barrel Corp., Detroit, Mich.  
 Whitaker-Glessner Co., Portsmouth, O.

#### BARRELS, TILTING.

- Baird Machine Co., Bridgeport, Conn.  
 Globe Machine & Stamping Co., Cleveland, Ohio.  
 Henderson Bros. Co., The, Waterbury, Conn.

#### BARRELS AND MILLS, TUMBLING.

- Abbott—The Abbott Ball Co., Hartford, Conn.  
 Barry—Barry Co., Muscatine, Iowa.  
 Bliss, E. C., Mfg. Co., Providence, R. I.  
 Caldwell & Son Co., H. W., Chicago, Ill.  
 Central Iron Works, Quincy, Ill.  
 Chain Belt Co., Milwaukee, Wis.

- Coleman—Foundry Equipment Co., Cleveland, Ohio.  
 Columbiana Boiler Co., Columbiana, O.  
 Dayton-Dowd Co., Quincy, Ill.  
 Globe—The Globe Machine & Stamping Co., Cleveland, O.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Henderson Bros., Waterbury, Conn.  
 Ideal—Ideal Concrete Machinery Co., Cincinnati, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Jumbo, Hercules, Neptune—O. J. Moussette Co., Inc., New York, N. Y.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 ♦ Macleod Co., The, Cincinnati, Ohio.  
 McCormick, J. S. Co., Pittsburgh, Pa.  
 Munning, A. P., & Co., New York.  
 Northern Engineering Works, Detroit, Mich.  
 Paxson, J. W., Co., Philadelphia, Pa.  
 ♦ Roversford Foundry & Machine Co., Philadelphia, Pa.  
 Sly—W. W. Sly Mfg. Co., Cleveland, O.  
 Stover Mfg. Co., Freeport, Ill.  
 Tessmer Machine & Tool Co., Detroit, Mich.  
 Whiting Foundry & Equipment Co., Harvey, Ill.

**BARRELS, WOODEN.**

- ♦ By-Products Division—E. I. du Pont de Nemours & Co., Wilmington, Del.

**BARRELS, WORMING.**

- Bolecourt—Midland Brass Works, Inc., The, Fort Worth, Tex.  
 Chicago Well Supply Co., Chicago, Ill. (Double action.)  
 Cook, A. D., Inc., Lawrenceburg, Ind.  
 Franklin Valveless Engine Co., Franklin, Pa.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Hough Mfg. Co., Chas. N., Franklin, Pa. (oil well).  
 Luitwieler—Luitwieler Pumping Engine Co., Rochester, N. Y. (deep well).  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McGregor—McGregor Working Barrel Co., Inc., Bradford, Pa.  
 Midwest Engine Co., Indianapolis, Ind.  
 Myers, F. E., & Bro., Ashland, O.  
 Norris, W. C., Tulsa, Okla.  
 Samsco—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Texas Mfg. Co., Ft. Worth, Tex.  
 Weinman—Weinman Pump Mfg. Co., Columbus, O.  
 Yaller Hammer—The Patin Bros. Co., Marietta, O.

**BARRIERS, STONE.**

- Euclid Stone & Brick Co., Cleveland, Ohio.

**BARROWS, WHEEL.**

(See Wheelbarrows.)

- Mullins Body Corp., Stamping Dept. A, Salem, O.

**BARS, ARON.**

- ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
 St. Louis Screw Co., St. Louis, Mo.

**BARS, BORING.**

- ♦ Agrippa—J. H. Williams & Co., Brooklyn, N. Y.  
 Beaman & Smith Co., Providence, R. I.  
 Chapin-Skelton Corp., Syracuse, N. Y.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 Davis Expansion Boring Tool Co., St. Louis, Mo.  
 Elmes Engineering Works, Chas. F., Chicago, Ill.  
 Gisholt Machine Co., Madison, Wis.  
 Kelly Reamer Co., The, Cleveland, O.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Madison Adjustable—Madison Mfg. Co., Muskegon, Mich.  
 Marvin & Casler Co., Canastota, N. Y.  
 Pedrick—Pedrick Tool & Machine Co., Philadelphia.  
 Red E—The Ready Tool Co., Bridgeport, Conn.  
 Rigid—Rigid Tool Holder Co., Baltimore, Md.  
 Rooksby, E. J., & Co., Philadelphia, Pa.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Underwood Corp., H. B., Philadelphia, Pa.  
 Union Tool Co., Orange, Mass.  
 Universal Boring Machine Co., Hudson, Mass.  
 ♦ Williams, J. H., & Co., Brooklyn, N. Y.

**BARS, CARPENTERS' WRECHING.**

- Challenge—Harrold Tool & Forge Co., The, Columbian, O.  
 Diemer, Geo. W., Mfg. Co., Chicago, Ill.  
 Easy—Easy Mfg. Co., David City, Neb.  
 Hargrave—Cincinnati Tool Co., Cincinnati, O.  
 H. J. H.—Harrold Tool & Forge Co., The, Columbian, O.  
 Iron City Star—Iron City Tool Works, Pittsburgh, Pa.  
 Johnson, William, Newark, N. J.  
 Klein-Logan Co., The, Pittsburgh, Pa.  
 Kraeuter & Co., Inc., Newark, N. J.  
 Leetonia Tool Co., The, Leetonia, O.  
 Marcy—Marcy Tool Works, Putnam, Conn.  
 Salem Tool Co., The, Salem, O.  
 The S. & I. Company, Springfield, Mass.

- ♦ Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Vichek Tool Co., The, Cleveland, O.

**BARS, IRON AND STEEL.**

- Ames, W., & Co., Jersey City, N. J. (Galvanized.)  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 ♦ Bethlehem Steel Co., South Bethlehem, Pa.  
 Bourne-Fuller Co., Cleveland, O.  
 Buch Foundry Equipment Co., York, Pa.  
 Burden Iron Co., Troy, N. Y.  
 Calumet Steel Co., Chicago, Ill.  
 Camden Forge Co., Camden, N. J.  
 Cann & Saul, Philadelphia, Pa.  
 Carbon Iron & Steel Co., New York, N. Y.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Central Steel Co., Massillon, O.  
 Cohoes Rolling Mill Co., Cohoes, N. Y.  
 Columbia Steel & Shaffing Co., Pittsburgh, Pa.  
 Compressed Steel Shaffing Co., Boston, Mass.  
 Cressman, M. O., Co., Philadelphia, Pa.  
 Crucible Steel Co. of America, Pittsburgh, Pa.  
 Delaware Steel Company, New York, N. Y.  
 ♦ Disston & Sons Co., Henry, Philadelphia, Pa.  
 Fort Wayne Rolling Mill Works, Fort Wayne, Ind.  
 Gulf States Steel Co., Birmingham, Ala.  
 Hammond-Byrd Iron Co., Birmingham, Ala.  
 Hirsch Rolling Mill Co., St. Louis, Mo.  
 ♦ Horseshoe—The Stanley Rule and Level Plant, Atha Dept., New Britain, Conn.  
 Igce Brothers, Newark, N. J. (Fabricated.)  
 Illinois Steel Co., Chicago, Ill.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Judson Mfg. Co., San Francisco, Cal.  
 Kansas City Bolt & Nut Co., Kansas City, Mo.  
 Lackawanna Steel Co., New York, N. Y.  
 Laclede Steel Co., St. Louis, Mo.  
 Lanman, E. B., Co., East Chicago, Ind.  
 ♦ Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 Milton Mfg. Co., Milton, Pa.  
 Moltrup Steel Products Co., Beaver Falls, Ky.  
 National Lock Washer Co., Newark, N. J.  
 New Process Steel Corp., Lancaster, Pa.  
 Nicetown Plate Washer Co., Philadelphia, Pa.  
 North Works, Chicago, Ill.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pardee Co. Works, Perth Amboy, N. J.  
 Peerless Drawn Steel Co., Massillon, Ohio.  
 Reading Iron Co., Reading, Pa.  
 ♦ Republic Iron & Steel Co., Youngstown, O.  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 Scully Steel & Iron Co., Chicago, Ill.  
 St. Louis Screw Co., St. Louis, Mo.  
 ♦ Standard Chain Co., Pittsburgh, Pa.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 "T.-T."—Metal Products & Supply Co., Philadelphia, Pa.  
 Tlaga Steel & Iron Co., Philadelphia, Pa.  
 United Alloy Steel Corp., Canton, O.  
 ♦ Youngstown Sheet & Tube Co., Youngstown, O.

**BARS, KEYWAY CUTTING.**

- Lapointe Machine Tool Co., Hudson, Mass.

**BARS, MINERS' TAMP.**

- American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Leetonia Tool Co., The, Leetonia, O.

**BARS, PINCH AND PRY.**

- Braunsdorf-Mueller Co., Elizabeth, N. J.  
 ♦ Buffum Tool Co., Louisiana, Mo.  
 Challenge—Harrold Tool & Forge Co., Columbian, O.  
 Diemer, Geo. W., Mfg. Co., Chicago, Ill.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 H. J. H.—Harrold Tool & Forge Co., Columbian, O.  
 ♦ Horseshoe—The Atha Tool Co., Newark, N. J.  
 Hubbard & Co., Pittsburgh, Pa.  
 Johnson, Wm., Newark, N. J.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 National Tool Co., Brooklyn, N. Y.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Perfect Handle—H. D. Smith Co., Plantsville, Conn.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 Victor—C. E. Bonner Mfg. Co., Chrisman, Ill.  
 Warren Tool & Forge Co., The, Warren, Ohio.  
 Warwood Tool Co., Wheeling, W. Va.  
 Webster Mfg. Co., Chicago, Ill.  
 Western Tool & Forge Co., Brackenridge, Pa.

**BARS, POST HOLE DIGGING.**

- Leetonia Tool Co., Leetonia, Ohio.

**BARS, RAIL SPLICE.**

- Ames, W., & Co., Jersey City, N. J.

**BARS, SINE.**

- Loway—A. F. Wav Co., Inc., Hartford, Conn.

**BARS, SPLICE.**

Lackawanna Steel Co., Lackawanna, N. Y.

**BARS, TOWEL.**

American Enamelled Products Co., Chicago, Ill. (China.)  
 American Ring Co., Waterbury, Conn. (Glass and Nickel.)  
 Art Brass Co., New York, N. Y.  
 All White, All Right—Bay Ridge Specialty Co., Inc., Trenton, N. J.  
 Avco—Alliance Vitreous China Co., The, Alliance, O.  
 Brasscrafters—Eustis, J. P., Mfg. Co., Boston, Mass.  
 Celluvarno—Sillcock-Miller Co., The, So. Orange, N. J. (White.)  
 Cline's—L. Cline Mfg. Co., Chicago, Ill.  
 Columbus Brass Co., Columbus, O.  
 Crane Co., Chicago, Ill.  
 Dallas Brass & Copper Co., Chicago, Ill.  
 Doerco—Doerr Glass Co., Vineland, N. J.



Easy Set—J. H. Balmer Co., Passaic, N. J. (China.)  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Nurre Mirror Plate Co., The, Bloomington, Ind.  
 Omala—The Galard Co., New York, N. Y.  
 Park & McKay Co., The, Detroit, Mich.  
 Richards, Benjamin & Co., Winsted, Conn.  
 Russell, John M., Mfg. Co., Inc., The, Naugatuck, Conn.  
 (Brass, Nickel Plated, White Enamel, Crystal, Opal.)  
 Samsonchina—S. D. Baker Mfg. Co., New York, N. Y.  
 Sanitary Specialties Co., Philadelphia, Pa.  
 Silver & Co., Brooklyn, N. Y.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Whitlock Coll Pipe Co., The, Hartford, Conn.  
 Wire Goods Co., The, Worcester, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia.

**BASES, OIL CUP.**

Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Lunkenheimer Co., The, Cincinnati, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 White Star—Pittsburg Gage & Supply Co., Pittsburg, Pa.

**BASES, RADIATOR.**

Logansport Radiator Equipment Co., Logansport, Ind.  
 D-I—C. C. Shipp & Co., Indianapolis, Ind.  
 Universal—Reading Heater & Supply Co., Reading, Pa.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass.

**BASES, WRINGER.**

Em Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Murray Co., John A., New York.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.

**BASES, "Y," FOR SAFETY VALVES.**

The Consolidated Safety Valve Co., New York.

**BASEMENT REVOLVING SPRINKLERS.**

Seattle Brass Co., Seattle, Wash.

**BASINS, BLOW-OFF.**

Clow, James B., & Sons, Chicago, Ill.  
 Acme—Compound Injector & Specialty Co., Chicago, Ill.

**BASINS, LAVATORY, PORCELAIN.**

(See also "Lavatories.")

Alpha—The Meyer-Sniffen Co., New York, N. Y.  
 Brighton—The Meyer-Sniffen Co., New York, N. Y.  
 Capoco—Camden Pottery Co., Camden, N. J.  
 Cincinnati—Crane Hawley Co., Cincinnati, Ohio.  
 Cochran, Drugan & Co., Trenton, N. J.  
 Dartmouth—F. W. Webb Mfg. Co., Boston, Mass.  
 Delta—The Meyer-Sniffen Co., New York, N. Y.  
 Eljer Co., Cameron, W. Va.  
 Florentine Pottery Co., The, Cambridge, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Holly—J. D. Johnson Co., Philadelphia, Pa.  
 Hydric—The Hydraulic Specialty Co., Philadelphia.

Ideal—L. Wolff Mfg. Co., Chicago, Ill.  
 Ilton—The Meyer-Sniffen Co., New York, N. Y.  
 Impervio—The Trenton Potteries Co., Trenton, N. J.  
 Jones Hollowware Co., Baltimore, Md.  
 Keystone Pottery Co., Trenton, N. J.  
 Kokomo Sanitary Mfg. Co., Kokomo, Ind.  
 Maddock's Sons Co., Thos., Trenton, N. J.  
 Manhattan—The J. L. Mott Iron Works, Trenton, N. J.  
 Pacific—Pacific Porcelain Ware Co., San Francisco, Cal.  
 Pemberton—The Meyer-Sniffen Co., New York, N. Y.  
 Perfect—Crane Hawley Co., Cincinnati, Ohio.  
 Perfection—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Pluvio—The Hydraulic Specialty Co., Philadelphia, Pa.  
 Pointer—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Popic—The Hydraulic Specialty Co., Philadelphia, Pa.  
 Primrose—J. D. Johnson Co., Philadelphia, Pa.  
 Radcliffe—F. W. Webb Mfg. Co., Boston, Mass.  
 Resolute Pottery Co., Trenton, N. J.  
 Rundle Mfg. Co., Milwaukee, Wis. (Enamelled.)  
 Santic—The Hydraulic Specialty Co., Philadelphia, Pa.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Universal—L. Wolff Mfg. Co., Chicago, Ill.  
 Upton—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Wellesley—F. W. Webb Mfg. Co., Boston, Mass.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Yale—F. W. Webb Mfg. Co., Boston, Mass.

**BASKETS, ASH.**

Iron Horse—Rochester Can Co., Rochester, N. Y.

**BASKETS, CORRUGATED.**

Iron Horse—Rochester Can Co., Rochester, N. Y.

**BASKETS, DIPPING.**

Buffalo Wire Works Co., Buffalo, N. Y.  
 Hanson & Van Winkle Co., The, Newark, N. J.  
 Improved—Improved Appliance Co., Brooklyn, N. Y.  
 Jelliff, C. O., Mfg. Corp., Southport, Conn.  
 Sackett Screen & Chute Co., H. B., Chicago, Ill.  
 Usona Mfg. Co., St. Louis, Mo.  
 Wright Wire Co., Worcester, Mass.

**BASKETS, MILL.**

Columbian Steel Tank Co., Kansas City, Mo.  
 Columbus Wire & Iron Works, Columbus, O.  
 Corco—Wheeling Corrugating Co., Wheeling, W. Va.  
 Fitts—Frank F. Fitts Mfg. Co., Boston, Mass.  
 Gueder, Paeschke & Frey Co., Milwaukee, Wis.  
 Holbrook Raw Hide Co., Providence, R. I.  
 Lane Bros. Co., Poughkeepsie, N. Y.  
 Lansing Co., Lansing, Mich.  
 Leatheroid—Rogers Fibre Co., Boston, Mass.  
 Morris & Co., Inc., Groverville, N. J.  
 Steel Basket & Specialty Co., Cedar Rapids, Ia.  
 Vul-Cot—American Vulcanized Fibre Co., Wilmington, Del.  
 Williams Mfg. Co., Northampton, Mass.

**BASKETS, STEEL, FRAME, CANVAS.**

Converse—F. S. Converse Co., Inc., Johnson City, N. Y.  
 Lane—W. T. Lane & Bro., Poughkeepsie, N. Y.

**BASKETS, STEEL, GALVANIZED.**

Hall Mfg. Co., Cedar Rapids, Ia.

**BASKETS, TOWEL, BRASS.**

Art Brass Co., New York, N. Y.  
 Brasscrafters—Eustis, J. P., Mfg. Co., Boston, Mass.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Omala—The Galard Co., Newark, N. J.  
 Silver & Co., Brooklyn, N. Y.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.

**BASKETS, WASTE.**

Fibrotta—Cordley & Hayes, New York, N. Y.  
 Diamond State Fibre Co., Bridgeport, Pa.  
 Standard Fibre Co., Somerville, Mass.

**BASKETS, WEIGH, COAL.**

Link-Belt Company, Chicago and Philadelphia.  
 ♦ Jeffrey Mfg. Co., Columbus, O.

**BASKETS, WIRE, FOR FIRE APPARATUS.**

Hayward & Co., S. F., New York, N. Y.

**BATHS, CHILD'S.**

Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Kohler Co., Kohler, Wis.  
 J. L. Mott Iron Works, Trenton, N. J. Trade names.  
 Ellison, Bellamy, Roosevelt.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.

**BATHS, CONCRETE, PORCELAIN LINED.**

Economy—Economy Concrete Co., New Haven, Conn.



**BATHS, COFFER OR NICKEL.**

Blessing, C. A., Philadelphia, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Philadelphia Sheet Metal & Wood Works, Philadelphia.  
 Seestedt, Henry W., Romulus, Mich.  
 Tragger Steam Copper Works, John, New York, N. Y.

**BATHS, CORNER AND LEGLESS.**

Standard Sanitary Mfg. Co., Pittsburg, Pa.

**BATHS, ELECTRIC LIGHT.**

The J. L. Mott Iron Works, Trenton, N. J.  
 Wolff Mfg. Co., Chicago, Ill.

**BATHS, FOOT.**

Crane Co., Chicago, Ill.  
 Dececo—The Dececo Co., Boston, Mass.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Iron City Sanitary Mfg. Co., Pittsburg, Pa.  
 Kanawha—J. L. Mott Iron Works, Trenton, N. J.  
 Kenmore—The J. L. Mott Iron Works, Trenton, N. J.  
 Kohler—Kohler Co., Kohler, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Tepeco—Trenton Pottery Co., Trenton, N. J.  
 Union Sanitary Works, Noblesville, Ind.

**BATHS, HOSPITAL.**

Concord—Humphries Mfg. Co., The, Mansfield, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Kohler—Kohler Co., Kohler, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Occident—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Princess—A. Weiskittel & Son Co., Baltimore, Md.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Tepeco—Trenton Pottery Co., Trenton, N. J.  
 Union Sanitary Works, Noblesville, Ind.

**BATHS, HYDROTHERAPEUTIC.**

Alcove—James B. Clow & Sons, Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Sanitarium—Haines, Jones & Cadbury Co., Philadelphia.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Wolff Mfg. Co., Chicago, Ill.

**BATH AND LAVATORY, COMBINED.**

Boudoir—Improved Sanitary Fixtures Co., Los Angeles, Cal.

**BATHS, LEAD, CARBONIZING.**

Scott, C. U., & Son, Rock Island, Ill.

**BATHS, NEEDLE AND SHOWER COMBINED.**

(See also "Baths, Shower.")

Crane Co., Chicago, Ill.  
 Dubois—F. N. Dubois & Co., Inc., The, New York, N. Y.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Em-Ess—The Meyer-Sniffen Co., New York.  
 Equality—Haines, Jones & Cadbury Co., Philadelphia.  
 Federal-Huber Co., Chicago, Ill.  
 Goetz—Goetz Brass Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Harlem—J. L. Mott Iron Works, Trenton, N. J.  
 Hudson Brass Works, Brooklyn, New York.  
 Kohler Co., Kohler, Wis.  
 Lehnert & Co., New York, N. Y.  
 Litterer Bros., Chicago, Ill.  
 McCambridge Co., Philadelphia, Pa.  
 Morgan & Fancher, New York, N. Y.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Perry, Raynor, Rector, Regent, Reina, Utility—J. L. Mott Iron Works, Trenton, N. J.  
 Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Speakman Co., Wilmington, Del.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 S. & K.—Street & Kent Mfg. Co., Chicago, Ill.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York, N. Y.  
 Webb Mfg. Co., F. W., Boston, Mass.  
 Wolff's—L. Wolff Mfg. Co., Chicago, Ill.

**BATHS, POOL.**

Standard Sanitary Mfg. Co., Pittsburg, Pa.

**BATHS, PORCELAIN.**

(See "Earthenware, Sanitary," for list of potteries)  
 Alvona, Pasadena, Traymore—Wolff Mfg. Co., Chicago, Ill.

Astor—The Peck Bros. & Co., New Haven, Conn.  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Barona—Peck Bros. & Co., New Haven, Conn.  
 Belmont—The Meyer-Sniffen Co., New York.  
 Berwyn, Merion, Riverton, Wyndmoor, Wyncote, Wynnewood—McCambridge Co., Philadelphia.  
 Calumet—The Meyer-Sniffen Co., New York.  
 Clow & Sons, James B., Chicago, Ill.  
 Cornova—Peck Bros. & Co., New Haven, Conn.  
 Crane Co., Chicago, Ill. Trade names—Columbia, Coronet, Doric, Chandos, Empress, Davenport, New Sinton, Recess, Winston, Labrum.  
 Dalton—James B. Clow & Sons, Chicago, Ill.  
 Eljer Co., Cameron, W. Va.  
 Geneva—Haines, Jones & Cadbury Co., Philadelphia.  
 Grecia—McCambridge Co., Philadelphia, Pa.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Johnson, J. D., Co., Inc. Trade names—Allenhurst, Astoria, Baby's, Buckingham, Foot, Ritz, Carlton, Saxon, Saronia, Sitz, Windsor.  
 Keystone—Keystone Supply & Mfg. Co., Philadelphia.  
 Maddocks, Thos., Sons Co., Trenton, N. J. Trade names—Porfree, Portile, Porend, Porcess.  
 Marshall—Sanitas Mfg. Co., Boston, Mass.  
 Monarch—Sanitas Mfg. Co., Boston, Mass.  
 Monterey—The Meyer-Sniffen Co., New York.  
 Monument Pottery Co., Trenton, N. J. Trade names—Brevoort, Gotham, Lakewood, Stuyvesant, Weelans, Concord, Precess, Traymore, Trayham, Traycove, Emergency Hospital, Trayelle.  
 Mott Iron Works, The J. L., Trenton, N. J. Trade names—Baronial, Prescott, Pierpont, Pontiac, Putnam, Pomona, Pelham, Roosevelt, Vernon, Universo.  
 The Peck Bros. & Co., New Haven, Conn. Trade names—Aurora, Tremont, Newport, Victory, Narcona, Ridgewood, Regina.  
 Pacific Sanitary Mfg. Co., San Francisco, Cal.  
 Peerless—McCambridge Co., Philadelphia.  
 Pierce—Pierce, Butler & Pierce Mfg. Corp., New York, N. Y. Trade names—Pierce Fayette, Pierce Onondaga, Syracuse.  
 Pontiac—J. L. Mott Iron Works, Trenton, N. J.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia.  
 Regent—Peck Bros. Co., New Haven, Conn.  
 Romana—McCambridge Co., Philadelphia.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Somerset—James Barrett Mfg. Co., Boston.  
 Touraine—James Barrett Mfg. Co., Boston.  
 Tepeco—Trenton Pottery Co., Trenton, N. J.  
 Underwood—Sanitas Mfg. Co., Boston, Mass.  
 U-num-da-da-gas—Chas. Miller & Son Co., Utica, N. Y.  
 Victoria—James Barrett Mfg. Co., Boston, Mass.  
 Walcott—Monument Pottery Co., Trenton, N. J.  
 Western States Porcelain Ware Works, Richmond, Cal.  
 Windsor—James B. Clow & Sons, Chicago.  
 Wolfco Co., Inc., The, Neenah, Wis.  
 Wolverine—James B. Clow & Sons, Chicago.

**BATHS, PORCELAIN ENAMELED.**

(For list of founders and enamelers see "Lavatories, Porcelain Enamelled.")

Albania—McCambridge Co., Philadelphia.  
 Albemarle—Sanitas Mfg. Co., Boston, Mass.  
 Albion—McCambridge Co., Philadelphia.  
 Albion—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 American Enamel Mfg. Corp., Elizabeth, N. J.  
 Andover—The Meyer-Sniffen Co., New York.  
 Ardsley—The Peck Bros. & Co., New Haven, Conn.  
 Atlantic—Haines, Jones & Cadbury Co., Philadelphia.  
 Avon—Iron City Sanitary Mfg. Co., Pittsburgh.  
 Bala, Hamilton—Walls, Owen & Stambach Co., Philadelphia, Pa.  
 Baltic—The Day-Ward Co., Warren, O.  
 Baltic—The Meyer-Sniffen Co., New York.  
 Barmouth—McCambridge Co., Philadelphia.  
 Baroness—Kohler Co., Kohler, Wis.  
 Belleville—Jenkins Mfg. Co., New York.  
 Bellevue—McCambridge Co., Philadelphia.  
 Belmont—McCambridge Co., Philadelphia.  
 Berkeley—Wolff Mfg. Co., Chicago, Ill.  
 Berkeley—The Peck Bros. & Co., New Haven, Conn.  
 Buckeye—The Day-Ward Co., Warren, O.  
 Calida—Crane Co., Chicago, Ill.  
 Carlisle—N. O. Nelson Mfg. Co., St. Louis.  
 Carlton—McCambridge Co., Philadelphia.  
 Cassia—A. Weiskittel & Son, Baltimore, Md.  
 Castilian—Dalton-Ingersoll Mfg. Co., Boston.  
 Chester—Haines, Jones & Cadbury Co., Philadelphia.  
 Childs—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Chippewa—D. L. Hamill, Buffalo, N. Y.  
 Climax—United States Sanitary Mfg. Co., Pittsburg.  
 Corona—Wolff Mfg. Co., Chicago, Ill.  
 Cottage—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Countess—A. Weiskittel & Son, Baltimore, Md.  
 Crane Co., Chicago, Ill.—Trade names—Calida, Compacto, Asylum, Dione, Doric, Latona, Medio, Nerels, New Undine, Unio, Verna, Doris, Modus.  
 Crown—Sanitas Mfg. Co., Boston, Mass.  
 Dalton, Etowah, Patten, Suwanee, Dixie, Dunlap, Debnar—Cahill Iron Works, Chattanooga, Tenn.  
 Delanco—Jenkins Mfg. Co., New York.  
 Devonshire—Sanitas Mfg. Co., Boston, Mass.

Dickinson—McCambridge Co., Philadelphia.  
 Eagle—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Ecetor—The Meyer-Sniffen Co., New York.  
 Eclipse—Standard Sanitary Mfg. Co., Pittsburgh.  
 Economy—The Hydraulic Specialty Co., Philadelphia.  
 Eloise—The Park & McKay Co., Detroit, Mich.  
 Empire—Sanitas Mfg. Co., Boston, Mass.  
 Empress—A. Weiskittel & Son, Baltimore, Md.  
 Empress—Sanitas Mfg. Co., Boston, Mass.  
 Erie—Haines, Jones & Cadbury Co., Philadelphia.  
 Estuary—Haines, Jones & Cadbury Co., Philadelphia.  
 Euclid, Everett, Emerson, Elmo, Eldon, Eutaw—J. L. Mott Iron Works, Trenton, N. J.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Floradora—Iron City Sanitary Mfg. Co., Pittsburgh.  
 Folcroft—McCambridge Co., Philadelphia.  
 Glenroy—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Glenwood—Jenkins Mfg. Co., New York, N. Y.  
 Golden Gate—The Humphreys Mfg. Co., Mansfield, O.  
 Government Pattern—N. O. Nelson Mfg. Co., St. Louis.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Harlem—United States Sanitary Mfg. Co., Pittsburgh.  
 Haverford—Haines, Jones & Cadbury Co., Philadelphia.  
 Hermoso—The Humphreys Mfg. Co., Mansfield, O.  
 Hoffman—Sanitas Mfg. Co., Boston, Mass.  
 Huronia—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Hydrio—The Hydraulic Specialty Co., Philadelphia.  
 Highland—McCambridge Co., Philadelphia.  
 Imperator, Viceroy, Colonna—Kohler Co., Kohler, Wis.  
 Imperial—Sanitas Mfg. Co., Boston, Mass.  
 Improved Sanitary Fixture Co., Los Angeles, Cal.  
 Ionian—The Meyer-Sniffen Co., New York.  
 Iroquois—Iron City Sanitary Mfg. Co., Pittsburgh.  
 Johnson, J. D., Co. Inc., Philadelphia, Pa. Trade names—Baby's, Baltic, Brinton, Carkabad, Cedruc, Cliff, Clifton, Columbia, Convento, Cornu, Crown, Drexel, Foot, Girard, Holland, Holly, Hospital Tub, Hospital Sitz, Kenilworth, Nucove, Norwood, Oceanic, Prudent, Princeton, Reverso, Rex Ronjo, Saxon, Sitz, Spartan, Tuxedo, Wadsworth.  
 Junion Eagle—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Kineo—Walls, Owen & Stambach Co., Philadelphia, Pa.  
 Kohler—Kohler Co., Kohler, Wis.  
 La Belle—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Labrum, Linova, Linovus—Crane Co., Chicago, Ill.  
 Larosa—The Humphreys Mfg. Co., Mansfield, O.  
 Lethean—Planet—Wolff Mfg. Co., Chicago, Ill.  
 Lethean—Sanitas Mfg. Co., Boston, Mass.  
 Liberty—Haines, Jones & Cadbury Co., Philadelphia.  
 Logan—Haines, Jones & Cadbury Co., Philadelphia.  
 Long Branch—Fred Adeo Co., New York.  
 Lurline—McCambridge Co., Philadelphia.  
 Manhattan—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
 Mascot—Pierce, Butler & Pierce Mfg. Co., Syracuse.  
 Mayflower—The Humphreys Mfg. Co., Mansfield, O.  
 Mendota, Naro, Seneca, Winona—McVay & Walker, Braddock, Pa.  
 Merion—Haines, Jones & Cadbury Co., Philadelphia.  
 Metropolis—The Meyer-Sniffen Co., New York.  
 Milton—Jenkins Mfg. Co., New York.  
 Modello—Iron City Sanitary Mfg. Co., Pittsburgh.  
 Mott, J. L., Iron Works, Trenton, N. J. Trade names—Crotona, Euclid, Emerson, Everett, Eclipse, Eutaw, Lawton.  
 Narberth, Narro, Newton—McCambridge Co., Philadelphia.  
 Narrowene—Haines, Jones & Cadbury Co., Philadelphia.  
 National Sanitary Mfg. Co., The, Salem, O.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo. Trade names—Beryl, Comfort, Emperor, Hoosier, Infants, Modern, Narro, Premier, Sitz, Levant, Lorraine, Luxuria, Mangolia, Umbria, Venus.  
 Nioba—Sanitas Mfg. Co., Boston, Mass.  
 Niobe—Sanitas Mfg. Co., Boston, Mass.  
 Nova—The Peck Bros. & Co., New Haven, Conn.  
 Nursery—Haines, Jones & Cadbury Co., Philadelphia.  
 Olympia—Fleck Bros. Co., Philadelphia.  
 Olympia—McCambridge Co., Philadelphia.  
 Olympia—N. O. Nelson Mfg. Co., St. Louis.  
 Olympic—Crane Co., Chicago, Ill.  
 Oneita—Chas. Millar & Sons Co., Utica, N. Y.  
 Ontario—Dimock & Fink Co., New York.  
 Parsian—The Meyer-Sniffen Co., New York.  
 Peerless—A. Weiskittel & Son, Baltimore, Md.  
 Pierce, Butler & Pierce Mfg. Corp., New York, N. Y. Trade names—Pierce Fayette, Pierce Onondaga, Syracuse.  
 Pilgrim—The Humphreys Mfg. Co., Mansfield, O.  
 Pinehurst—Walls, Owen & Stambach Co., Philadelphia, Pa.  
 Pluvio—The Hydraulic Specialty Co., Philadelphia.  
 Plymouth—The Humphreys Mfg. Co., Mansfield, O.  
 Pointer—Haines, Jones & Cadbury Co., Philadelphia.  
 Pontiac—Dimock & Fink Co., New York.  
 Premier—The Sanitary Co., Cleveland, O.  
 Primula—The National Sanitary Mfg. Co., Salem, O.  
 Princess—A. Weiskittel & Son Co., Baltimore, Md.  
 Priscilla—The Humphreys Mfg. Co., Mansfield, O.  
 Puritan—The Humphreys Mfg. Co., Mansfield, O.

Puro—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Quincy—Sanitas Mfg. Co., Boston, Mass.  
 Radnor—McCambridge Co., Philadelphia, Pa.  
 Regal—The Sanitary Co., Cleveland, O.  
 Regal—Sanitas Mfg. Co., Boston, Mass.  
 Regina—Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Rex—D. L. Hamill Co., Buffalo, N. Y.  
 Rex—The Sanitary Co., Cleveland, O.  
 Rialto, Supreme—Walls, Owen & Stambach Co., Philadelphia, Pa.  
 Richmond—Richmond Radiator Co., New York.  
 Roman—Sanitas Mfg. Co., Boston, Mass.  
 Romain, Bi Transit, Municipal, Regina, Astoria, Ridgewood, Narcona—Peck Bros. & Co., New Haven, Conn.  
 Rossmore—Iron City Sanitary Mfg. Co., Pittsburgh.  
 Royal—Sanitas Mfg. Co., Boston, Mass.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Salvia—The National Sanitary Mfg. Co., Salem, O.  
 Sanitarium—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Saxon—The John Douglas Co., Cincinnati, O.  
 Sharon—McCambridge Co., Philadelphia.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa. Trade names: Adonis, Adopto, Ariens, Bristol, Brockley, Cadmus, Carlisle, Clarion, Conrod, Cornell, Elysian, Essex, Glenroy, Keystone, Knickerbocker, Lacon, Lascar, Lawrence, Legnon, Levant, Linwood, Lorraine, Luxor, Madeline, Majestic, Malvern, Marwood, Maynard, Meteor, Metropolis, Monarch, Morris, Narrorin, Occident, Olympia, Oranston, Pool, Piercon, Premier, Princeton, Receptors, Rockton, Rome, Recona, Roval, Shawmut, Simple, Walton.  
 Standish—Sanitas Mfg. Co., Boston, Mass.  
 Stanton—Jenkins Mfg. Co., New York, N. Y.  
 Star—Wolff Mfg. Co., Chicago, Ill.  
 Stanton—McCambridge Co., Philadelphia, Pa.  
 Superba—United States Sanitary Mfg. Co., Pittsburgh.  
 Torenia—The National Sanitary Mfg. Co., Salem, O.  
 Touraine—McCambridge Co., Philadelphia, Pa.  
 Triumph—Peck Bros. & Co., New Haven, Conn.  
 Union Sanitary Works, Noblesville, Ind. Trade names—Beryl, Comfort, Emperor, Hoosier, Infants, Modern, Nobbe, Narro, Premier, Sitz, Tilein, Dignon, Marnon, Grandon, Ovolo.  
 U-nun-da-gas—Chas. Millar & Son Co., Utica, N. Y.  
 U. T. K.—Chas. Millar & Son Co., Utica, N. Y.  
 Venetian—Sanitas Mfg. Co., Boston, Mass.  
 Verona—James B. Clow & Sons, Chicago, Ill.  
 Victoria—Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Vollrath—Vollrath Co., The, Sheboygan, Wis.  
 Wakefield—Sanitas Mfg. Co., Boston, Mass.  
 Walton—McCambridge Co., Philadelphia, Pa.  
 Warwick—The Humphreys Mfg. Co., Mansfield, O.  
 Washington—United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Waverly—Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Western—Washington Iron Works, Los Angeles, Cal.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Windsor—The Meyer-Sniffen Co., New York, N. Y.  
 World's Fair—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Worran—A. Weiskittel & Son Co., Baltimore, Md.  
 Wosco—Walls, Owen & Stambach Co., Philadelphia, Pa.

#### BATHS, BAIN.

Crane Co., Chicago, Ill.  
 Goetz Brass Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 McCambridge Co., Philadelphia, Pa.  
 Middleton—The Meyer-Sniffen Co., New York, N. Y.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Speakman Co., Wilmington, Del.  
 Taylor, Geo., Brass & Bronze Works Inc., New York, N. Y.  
 Wolff's—Wolff Mfg. Co., Chicago, Ill.

#### BATHS, SEAT, PORCELAIN.

American—James B. Clow & Sons, Chicago, Ill.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Latona—The J. L. Mott Iron Works, Trenton, N. J.  
 Laxton—The J. L. Mott Iron Works, Trenton, N. J.  
 McCambridge Co., Philadelphia, Pa.  
 Monument—Monument Pottery Co., Trenton, N. J.  
 Paris—The Meyer-Sniffen Co., New York, N. Y.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Spoke—McCambridge Co., Philadelphia.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.

#### BATHS, SEAT, PORCELAIN ENAMELED.

Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Kohler—Kohler Co., Kohler, Wis.  
 Linden—The J. L. Mott Iron Works, Trenton, N. J.  
 Lisbon—The J. L. Mott Iron Works, Trenton, N. J.  
 Novus—Wolff Mfg. Co., Chicago, Ill.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Weiskittel & Son, A., Baltimore, Md.

**BATHS, SHOWER.**

Art Brass Co., New York, N. Y.  
 Beekman—Garrison Brass & Machine Co., New York.  
 Blessing, C. A., Philadelphia, Pa.  
 Cascade—Fleck Bros. Co., Philadelphia, Pa.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Cleveland Blow Pipe Mfg. Co., Cleveland, Ohio.  
 Clow & Sons, James B., Chicago, Ill.  
 Columbia—Hoelscher Bros., Chicago, Ill.  
 Crane Co., Chicago, Ill.  
 Douglas, John Co., The, Cincinnati, Ohio.  
 Dubois—F. N. Dubois & Co., New York, N. Y.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Em Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Equality—Haines, Jones & Cadbury Co., Philadelphia  
 Federal-Huber Co., Chicago, Ill.  
 Goetz—Goetz Brass Co., Chicago, Ill.

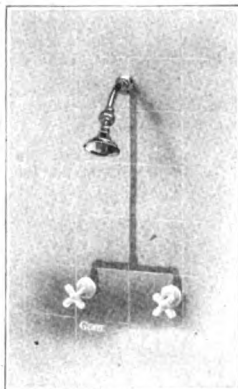
**SHOWERS**

Built-In  
and  
Exposed

Curtain Rings  
Curtain Rails  
Curtains

Concealed and Exposed  
Bath Fixtures

**GOETZ** BRASS  
COMPANY  
Chicago, Ill.



Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Harlem—The J. L. Mott Iron Works, Trenton, N. J.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Hudson Brass Works, Brooklyn, N. Y.

**Shower Baths**

Supply and Waste Fixtures, etc.

**HUDSON BRASS WORKS**

16 Nassau St., Brooklyn, N. Y.

Hutchinson, Thos. H., New York, N. Y.  
 Imco Mfg. Co., New York, N. Y.  
 Imperial—Imperial Brass Mfg. Co., Chicago, Ill.  
 Johnson Co., Philadelphia, Pa.  
 Kohler—Kohler Co., Kohler, Wis.  
 Lehnert & Co., New York, N. Y.  
 Lolico—Louis Lipp Co., Cincinnati, O.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Milwaukee—Milwaukee Flush Valve Co., Milwaukee, Wis.  
 Monarch—Vant Woud Rubber Co., Brooklyn, N. Y.  
 M. V. B. Tempurator—Sturgis Co., Sturgis, Mich.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Niagara—Fleck Bros. Co., Philadelphia, Pa.  
 Niagara—Speakman Co., Wilmington, Del.  
 Niedecken—Hoffmann & Billings Mfg. Co., Milwaukee  
 Nu Ring, Rex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Phillips—Garrison Brass Machine Co., New York, N. Y.  
 Powers Mfg. Co., J. P., Ossining, N. Y.  
 Primrose—Reid Brass Mfg. Co., Brooklyn, N. Y. (Concealed).  
 Ross & Gade Co., Inc., New York, N. Y.  
 Royal Brass Mfg. Co., Cleveland, Ohio.  
 Rumsey Mfg. Co., L. M., St. Louis, Mo.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Sandham—R. R. Sandham, Harlan, Ia. (attachment for bathtubs).  
 Sanibross Corp., The, Brooklyn, N. Y.  
 Sanitas Mfg. Co., Boston, Mass.  
 Santos—Jenkins Mfg. Co., New York, N. Y.  
 Silver & Co., Brooklyn, N. Y.  
 S. & K. Western Beauty—Street & Kent Mfg. Co., Chicago, Ill.  
 Speakman—Speakman Co., Wilmington, Del.  
 Standard—Fleck Bros. Co., Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York, N. Y.

Toledo Mfg. & Supply Co., The, Toledo, O.  
 Victory—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Walsh Mfg. Co., Owen, New York, N. Y.  
 Weiskittel & Sons, A., Baltimore, Md.  
 Windsor—Jenkins Mfg. Co., Inc., New York, N. Y.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**BATHS, SHOWER, PORTABLE.**

Beekman—Garrison Brass & Machine Works, New York, N. Y.  
 Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Elgin Shower—Elgin Brass Co., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Goetz—Goetz Brass Co., Chicago, Ill.  
 Hudson Brass Works, Brooklyn, N. Y.  
 Kenney—Curtainless Shower Co., New York.  
 Kuloff—Wallace Novelty Co., Inc., New York.  
 Lehnert & Co., New York, N. Y.  
 Luxuria—A. Weiskittel & Son Co., Baltimore, Md.  
 Modus, Uno—Crane Co., Chicago, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Perfection—Wolverine Brass Works, Grand Rapids, Mich.  
 Powers Mfg. Co., J. P., Ossining, N. Y.  
 Ronjo, Saxon, Saxon Special—J. D. Johnson Co., Philadelphia, Pa.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Sensible—The Peck Bros. & Co., New Haven, Conn.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Speakman Co., Wilmington, Del.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Sternau—S. Sternau & Co., New York, N. Y.  
 Superior—Superior Brass Novelty Co., New York.  
 Webco—F. W. Webb Mfg. Co., Boston, Mass.  
 Weiskittel & Son, A., Baltimore, Md.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 YCO—Loyal Brass Co., Cleveland, O.

**BATHS, STEEL AND STEEL CLAD.**

Columbian Steel Tank Co., Kansas City, Mo.  
 Ro-San—Rowe Sanitary Mfg. Co., Detroit, Mich.  
 (With water heater.)  
 Walker Mfg. & Supply Co., Detroit, Mich.

**BATTERIES, BLASTING.**

Davis—Davis Instrument Mfg. Co., Inc., Baltimore, Md.  
 ♦ Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

**BEARINGS, BALL.**

(See also "Balls, Steel.")

Ahlberg Bearing Co., Chicago, Ill.  
 Atlas—S. K. F. Industries, Inc., New York, N. Y.  
 Ball & Roller Bearing Co., The, Danbury, Conn.  
 Bantam Ball Bearing Co., Bantam, Conn.  
 B. C. A.—Bearings Co. of America, Lancaster, Pa.  
 B. F. K.—J. H. Lehman Mfg. Co., Inc., New York, N. Y.  
 B-N-Long Life—Burgess-Norton Mfg. Co., Geneva, Ill.  
 Bower Roller Bearing Co., Detroit, Mich.  
 Commercial—Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Duplex and K. S.—Globe Ball Bearing Co., Norwich, Conn.  
 F. & S.—Bearings Co. of America, New York, N. Y.  
 G.-A., S. G. A.—G.-A. Ball Bearing Mfg. Co., Chicago, Ill.  
 Grant & Wood Mfg. Co., Detroit, Mich.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Gurney—Gurney Ball Bearing Co., Jamestown, N. Y.  
 Harris & Reed Mfg. Co., Chicago, Ill.  
 Hess-Bright—S. K. F. Industries, Inc., New York.  
 Hoover Steel Ball Co., Ann Arbor, Mich.  
 Imperial—Imperial Bearing Co., Detroit, Mich.  
 Langhaar—Langhaar Ball Bearing Co., Aurora, Ind.  
 Lewellen Mfg. Co., Columbus, Ind.  
 New Departure Mfg. Co., The, Bristol, Conn.  
 New York Bearing Co., Inc., New York, N. Y.  
 ♦ Norma—The Norma Company of America, New York, N. Y.  
 Oakes Pressed Steel Co., Indianapolis, Ind.  
 Payson Mfg. Co., Chicago, Ill.  
 R. B. B.—Rochester Ball Bearing Co., Inc., Rochester, N. Y.  
 Sackett, H. B. Screen & Chute Co., Chicago, Ill.  
 Salisbury Ball Bearing Corp., Jamestown, N. Y.  
 S. R. B.—Standard Steel & Bearings, Inc., Philadelphia.  
 Standard Machinery Co., Providence, R. I.  
 Strom—United States Ball Bearing Mfg. Co., Chicago, Ill.  
 Suspension—Suspension Bearing Co., Spartanburg, S. C.  
 Universal—Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass.

**BEARINGS, BALL, LINESHAFT.**

- ♦ Chicago Pulley & Shafting Co., Chicago, Ill.
- ♦ Chapman—Transmission Ball Bearing Co., Buffalo, N. Y.
- Fafnir—The Fafnir Bearing Co., New Britain, Conn.
- S. K. F.—S. K. F. Industries, Inc., New York.

**BEARINGS, COLLAR OILING.**

- ♦ Hill Clutch Co., The, Cleveland, O.
- The Wolf Company, Chambersburg, Pa.

**BEARINGS, ECCENTRIC.**

- American Tool & Machine Co., Boston, Mass.
- Link-Belt Company, Chicago and Philadelphia.
- Nordyke & Marmon Co., Indianapolis, Ind.

**BEARINGS, BUSHINGS, BOXES AND BRASSES, BRASS AND BRONZE, CAR AND ENGINE.**

- Ajax Metal Co., Philadelphia, Pa.
- American Tool & Machine Co., Boston, Mass.
- Arctur—Moore-Jones Brass & Metal Co., St. Louis, Mo.
- Arguto Oilless Bearing Co., Philadelphia, Pa.
- ♦ Bond Foundry & Mfg. Co., Manheim, Pa.
- Brady Brass Co., Jersey City, N. J.
- Bronze Metal Co., New York, N. Y.
- ♦ Collar End—Standard—Standard Pressed Steel Co., Philadelphia, Pa.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Edna Brass Mfg. Co., Cincinnati, O.
- Franz-Holbrook Bronze Co., Newark, N. J.
- Gilbert—A. Gilbert & Sons, Brass Fdy. Co., St. Louis, Mo.
- Hall Mfg. Co., Harrison, N. J.
- ♦ Hill Collar Oiling—Hill Clutch Co., The, Cleveland, O.
- ♦ Hoyt Metal Co., St. Louis, Mo.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Hunter—James Hunter Machine Co., North Adams, Mass.
- ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- Johnson Bronze Co., New Castle, Pa.
- Lawrenceville Bronze Co., Pittsburgh, Pa.
- Leard, Wm. E., New Brighton, Pa.
- Link-Belt Company, Chicago and Philadelphia.
- ♦ Lumen—Lumen Bearing Co., Buffalo, N. Y.
- M. C. B. Standard—St. Louis Malleable Casting Co., St. Louis, Mo.
- Meese & Gottfried Co., San Francisco, Cal.
- ♦ Michigan Smelting & Refining Co., Detroit, Mich.
- Mogul—Muzzy-Lyon Co., Ltd., Detroit, Mich.
- National Foundry Mfg. & Supply Co., Williamsport, Pa.
- National Malleable Casting Co., The, Cleveland, O.
- Naylor Bros., Peekskill, N. Y.
- Non-Gran—American Bronze Corp., Berwyn, Pa.
- Nordyke & Marmon Co., Indianapolis, Ind.
- North America Metaline Co., Long Island City, N. Y.
- North Star Foundry Co., Minneapolis, Minn.
- Parker White Metal & Machine Co., Erie, Pa.
- Pittsburgh Bronze Casting Co., Pittsburgh, Pa.
- Rex—Chain Belt Co., Milwaukee, Wis.
- Sauer Power Generating Co., Pittsburgh (adjustable).
- ♦ Sherwood Mfg. Co., Buffalo, N. Y.
- Sprout, Waldron & Co., Muncy, Pa.
- Standard Roller Bearing Co., West Philadelphia, Pa.
- 20th Century Brass Works, Minneapolis, Minn.
- Union Spring & Mfg. Co., New Kensington, Pa.
- United American Metals Corp., Brooklyn, N. Y.
- ♦ Valley Iron Works, Williamsport, Pa.
- ♦ Webster Mfg. Co., Chicago, Ill.
- Weller Mfg. Co., Chicago, Ill.
- Western Block Co., Lockport, N. Y.
- Wheland Co., The, Chattanooga, Tenn.

**BEARINGS, ARMATURE AND JOURNAL, BRONZE.**

- Ball & Roller Bearing Co., Danbury, Conn.
- Barnard & Leas Mfg. Co., Moline, Ill.
- Brass Foundry Co., Peoria, Ill.
- Bunting—Bunting Brass & Bronze Co., Toledo, O.
- Bronze Metal Co., New York, N. Y.
- ♦ Chicago—Chicago Pulley & Shafting Co., Chicago, Ill.
- Chicago Bearing Metal Co., Chicago, Ill.
- Damascus—Damascus Bronze Co., Pittsburgh, Pa.
- Gilbert—A. Gilbert & Sons Brass Fdy. Co., St. Louis, Mo.
- Hanson Clutch & Machinery Co., Tiffin, O.
- Lawrenceville Bronze Co., Pittsburgh, Pa.
- ♦ Lumen—Lumen Bearing Co., Buffalo, N. Y.
- Metaline Co., The, Long Island City, N. Y.
- Muzzy Lyon Co., Ltd., Detroit, Mich.
- Pittsburgh White Metal Co., Pittsburgh, Pa.
- Richardson, Edro, Brass Co., Baltimore, Md.
- Welch, T. F., & Co., Boston, Mass.
- Zenite Metal Co., Indianapolis, Ind.

**BEARINGS, BRONZE, BABBITT LINED.**

- Hoyt Metal Co., St. Louis, Mo.
- 20th Century Brass Works, Inc., Minneapolis, Minn.

**BEARINGS, DIE CAST.**

- Mogul—The Muzzy Lyon Co., Ltd., Detroit, Mich.

**BEARINGS, QUILL.**

- ♦ Woods, T. B., Sons Co., Chambersburg, Pa.

**BEARINGS, ROLLER.**

- Accurate—Accurate Engineering Co., Chicago, Ill.
- American Roller Bearing Co., Pittsburg, Pa.
- Ball & Roller Bearing Co., The, Danbury, Conn.
- Bantam Ball Bearing Co., Bantam, Conn.
- Bock—Bock Bearing Co., The, Toledo, O.
- Bower—Bower Roller Bearing Co., Detroit, Mich.
- Caldwell & Son Co., H. W., Chicago, Ill.
- Gillette Roller Bearing Co., Grand Rapids, Mich.
- Graham Roller Bearing Corp., Coudersport, Pa.
- Hart Staggered—The Hart Roller Bearing Co., Orange, N. J.
- Hercules—Hercules Mfg. Co., Centerville, Iowa.
- Makutchan—Makutchan Roller Bearing Co., Joliet, Ill.
- National Acme Mfg. Co., Cleveland, O.
- New York Bearings Co., Inc., New York, N. Y.
- ♦ Norma—The Norma Company of America, New York, N. Y.
- Railway Roller Bearing Co., Syracuse, N. Y.
- Roll-Way—Railway Roller Bearing Co., Syracuse, N. Y.
- Roller Bearings Mfg. Co., The, East Orange, N. J.
- Standard Machinery Co., Providence, R. I.
- Standard Roller Bearing Co., Philadelphia, Pa.
- Timken—Timken Roller Bearing Co., Canton, O.

**BEARINGS, ROLLER, LINESHAFT.**

- ♦ Bond Foundry & Machine Co., Manheim, Pa.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Hill Clutch Co., The, Cleveland, Ohio.
- Hyatt—Hyatt Roller Bearing Co., New York, N. Y.
- Sells—Royersford Foundry & Machine Co., Philadelphia, Pa.

**BEARINGS, ROLLER, WOOD.**

- Estes, E. B., & Sons, New York, N. Y.

**BEARINGS, ROLLING MILL.**

- The Ajax Metal Co., Philadelphia, Pa.

**BEARINGS, SELF-LUBRICATING.**

- American Vulcanized Fibre Co., Wilmington, Del.
- Arguto—Arguto Oilless Bearing Co., Philadelphia, Pa.
- Barry Co., Muscatine, Iowa.
- Bound Brook Oil-Less Bearing Co., Bound Brook, N. J.
- Caldwell, W. H., & Son Co., Chicago, Ill.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Hanson Clutch & Machinery Co., Tiffin, O.
- ♦ Hill Clutch Co., The, Cleveland, O.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Jones, W. A., Foundry & Machine Co., Chicago, Ill.
- Jeffrey Mfg. Co., The, Columbus, O.
- Link-Belt Company, Chicago and Philadelphia.
- ♦ Medart Patent Pulley Co., St. Louis, Mo.
- Metaline Co., The, Long Island City, N. Y.
- Nigrum—Graphite Lubricating Co., Bound Brook, N. J.
- Nolu—Nolu Oilless Bearing Co., Philadelphia.
- Nordyke & Marmon Co., Indianapolis, Ind.
- O. & S. Bearing Co., Detroit, Mich.
- Randall—Randall Graphite Products Corp., Chicago.
- Royersford Foundry & Machine Co., Philadelphia, Pa.
- Torrey Roller Bushing Works, Bath, Me.
- 20th Century Brass Works, Inc., Minneapolis, Minn.
- Webster Mfg. Co., Chicago, Ill.

**BEARINGS, SHAFT, ADJUSTABLE.**

- Sauer—Sauer Power Generator Co., Pittsburgh, Pa.

**BEARINGS, SHAFT, RING, WICK AND CHAIN OILING.**

- Barnard & Leas Mfg. Co., Moline, Ill.
- Cresson Morris Co., Philadelphia, Pa.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Falls Clutch & Machine Co., Cuyahoga Falls, O.
- ♦ Hill Collar Oiling—The Hill Clutch Co., Cleveland, O.
- Jones, W. A., Foundry & Machine Co., Chicago, Ill.
- Link-Belt Company, Chicago, Ill.
- Medart Patent Pulley Co., St. Louis, Mo.
- Royersford Foundry & Machine Co., Philadelphia, Pa.
- ♦ Woods, T. B., Sons Co., Chambersburg, Pa.

**BEARINGS, SHAFT, STEP.**

- American Tool & Machine Co., Boston, Mass.
- ♦ Hill Clutch Co., The, Cleveland, O.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Jones—W. A. Jones Fdy. & Machine Co., Chicago.
- Link-Belt Company, Chicago, Ill.
- Nordyke & Marmon Co., Indianapolis, Ind.
- ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

**BEARINGS, SHAFT, WALL.**

- American Tool & Machine Co., Boston, Mass.
- Boston Gear Works, Norfolk Downs, Mass.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Nordyke & Marmon Co., Indianapolis, Ind.

**BEARINGS, STERN AND STUFFING.**

Richardson, Edro, Brass Co., Baltimore, Md.

**BEARINGS, TAKE-UP.**

Link-Belt Company, Chicago, Ill.  
Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.

**BEARINGS, THRUST.**

American Tool & Machine Co., Boston, Mass.  
Graham Roller Bearing Corp., Coudersport, Pa.  
Gurney Ball Bearing Co., Jamestown, N. Y.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
New York Bearings Co., Inc., New York, N. Y.  
♦ Norma—Norma Co. of America, New York, N. Y.  
Suspension—Suspension Bearing Co., Spartanburg, S. C.  
U. S. Ball Bearing Co., Chicago, Ill.

**BELLOWS, FOUNDRY.**

Dobson—William Dobson, Canastota, N. Y.  
Obermayer, S., Co., The Cincinnati, O.  
Paxson, J. W., Co., Philadelphia, Pa.

**BELLS, ENGINE AND SHIP.**

Blymer Iron Works Co., The Cincinnati, O.  
Garratt & Co., W. T., San Francisco.  
Meneely, Geo. R., & Son, Inc., Watervliet, N. Y.  
Meneely Bell Co., Troy, N. Y.  
McShane Bell Foundry Co., Baltimore, Md.  
Seattle Brass Co., Seattle, Wash.  
The Thomas Laughlin Co., Portland, Me.  
Van Duzen Co., E. W., Cincinnati, O.  
Weimer Machine Works, Lebanon, Pa.

**BELLS, FIRE.**

Meneely Bell Co., Troy, N. Y.  
Reiter, G. C., Canton, O.

**BELLS.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Bevin Bros., Mfg. Co., St. Louis, Mo.  
Marine Mfg. & Supply Co., New York, N. Y.  
Pressed Steel Tank Co., Milwaukee, Wis.  
Reiter, G. C., Canton, O.  
Ross-Meehan Foundries, Chattanooga, Tenn.  
Sargent & Co., New York, N. Y.  
Wall Mfg. & Supply Co., P., Pittsburg, Pa.

**BELT FASTENERS, LACERS & HOOKS.**

(See also Fasteners, Belt, and Hook.)

Bristol's Patent Steel—Bristol Co., The, Waterbury, Conn.  
Bull Dog—Detroit Belt Lacer Co., Detroit, Mich.  
♦ Clipper—Clipper Belt Lacer Co., Grand Rapids, Mich.  
Crescent—Crescent Belt Fastener Co., New York.  
E. W. Co., The, Detroit, Mich.  
Flexible Steel Lacing Co., Chicago, Ill.  
Jackson Belt Lacers—Birdsboro Steel Fdy. & Mach. Co., Birdsboro, Pa.  
Jewell Belt Hook Co., Hartford, Conn.  
Peerless—Peerless Belt Lacing Machine Co., Philadelphia.  
Reinhold Belting & Supply Co., Brooklyn, N. Y.

**BELTING, AXLE LIGHTING.**

Chicago Rawhide Mfg. Co., Chicago, Ill.  
Diamond Rubber Co., Inc., The, Akron, Ohio.  
♦ Dick, R. & J., Co., Inc., Passaic, N. J.  
Hewitt Rubber Co., Buffalo, N. Y. Trade name—Hewitt Rubber Covered.  
Hudson Belting Co., Worcester, Mass.  
Imperial Belting Co., Chicago, Ill.  
Karlite—Imperial Belting Co., Chicago, Ill.  
Maltese Cross—Gutta Percha & Rubber Mfg. Co., New York.  
♦ Maxecon—Goodrich Rubber Co., B. F., Akron, O.  
New York Leather Belting Co., New York, N. Y.  
Quaker City Rubber Co., Philadelphia, Pa.  
♦ United States Rubber Co., Mechanical Goods Div., New York.  
Victor-Balata & Textile Belting Co., New York.

**BELTING BALATA.**

Clermont, Hi-Test, Hudson—Hudson Mechanical Rubber Co., New York, N. Y.  
Dawson—Dawson Belting Co., New York.  
♦ Dickbelt—R. & J. Dick Co., Inc., Passaic, N. J.  
Dominion—Dominion Asbestos and Rubber Corp., New York.  
Goodyear Tire & Rubber Co., Akron, Ohio.  
♦ Gutta-Balata—Boston Belting Co., Boston, Mass.  
♦ Lanco—The Republic Rubber Corp., Youngstown, O.  
♦ Ne-Pac—Capen Belting & Rubber Co., St. Louis, Mo.  
♦ Olmsted-Flint Co., Cambridge, Mass.  
Rossendale-Reddaway Belting & Hose Co., Newark, N. J.  
Tisafine—The Strong Machinery & Supply Co., New York.

Union Rubber & Asbestos Co., Trenton, N. J.  
♦ Veelos—Manheim Mfg. & Belting Co., Manheim, Pa.  
Victor-Balata—Victor-Balata & Textile Belting Co., New York, N. Y.

**BELTING, CANVAS, STITCHED.**

Alfalfa—Burrell Belting Co., Chicago, Ill.  
Allied Belting Co., Greenville, O.  
♦ Alpha, Big Chief—American Belting Co., Texas, Md.  
♦ Atlas—Acme Belting Co., Niles, Mich.  
Ampere—Victor-Balata & Textile Belting Co., New York.  
Anaconda—Main Belting Co., Philadelphia, Pa.  
Antisulpho—Imperial Belting Co., Chicago, Ill.  
Bengal—The Rossendale-Reddaway Belting & Hose Co., Newark, N. J.  
♦ Black Diamond—Acme Belting Co., Niles, Mich.  
Black Giant—McIlroy Belting & Hose Co., Hammond, Ind.  
♦ Boss—Mt. Vernon Belting Co., Baltimore, Md.  
♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
♦ Burro—United States Rubber Co., Mechanical Goods Div., New York.  
♦ Calumet—Acme Belting Co., Niles, Mich.  
Carton—The Carton Belting Co., Boston, Mass.  
Carzak, Wiltrac—The Carton Belting Co., Boston, Mass.  
♦ Chesapeake—The Chesapeake Belting Co., Baltimore, Md.  
♦ Chicago—United States Rubber Co., Mechanical Goods Div., New York.  
Cleveland—United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
Crown—Page Belting Co., Concord, N. H.  
Cury—J. W. Cury Co., Cincinnati, O.  
♦ Dickbelt—R. & J. Dick Co., Inc., Passaic, N. J.  
Dominion—Dominion Asbestos and Rubber Corp., New York.  
The Dixie Belt—The Gandy Belting Co., Baltimore.  
Durco-Belt—Duryea Mfg. Co., Bayonne, N. J.  
♦ Ensign—Olmsted-Flint Co., Cambridge, Mass.  
♦ Fabreeka—Olmsted-Flint Co., Cambridge, Mass.  
Federal—Federal Belting Co., Baltimore, Md.  
The Gandy Belt—Gandy Belting Co., The, Baltimore.  
Gibraltar—Johnson Belting Co., New York, N. Y.  
Gilmer—L. H. Gilmer Co., Philadelphia, Pa.  
♦ Hemek—Manheim Mfg. & Belting Co., Manheim, Pa.  
♦ Hettrick—The Hettrick Mfg. Co., Toledo, O.  
Hoo Hoo—National Leather Belting Co., New York.  
Ibco—Imperial Belting Co., Chicago, Ill.  
Imp—Union Rubber & Asbestos Co., Trenton, N. J.  
King Cotton—Chesapeake Belting Co., Baltimore, Md.  
Kobold—Kobold Sales Co., New Orleans, La.  
Leviathan—Main Belting Co., Philadelphia, Pa.  
Lord Baltimore—American Belting Companies, Texas, Md.  
Marathon—Loeb Bros. Leather Belting Co., New York.  
♦ Mt. Vernon—Mount Vernon Belting Co., Baltimore.  
Ne-Pac—Capen Belting & Rubber Co., St. Louis, Mo.  
♦ Niagara-Sawyer—United States Rubber Co., Mechanical Goods Div., New York.  
♦ Obstatich—Mt. Vernon Belting Co., Baltimore, Md.  
♦ Pawnee—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
♦ Pennant—Olmsted-Flint Co., Cambridge, Mass.  
♦ Perfection Red—Bonner & Barnewell, Inc., New York.  
Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.  
Rexall, Sandow, Sahara, Antisulpho, Sanital, Submarine—Imperial Belting Co., Chicago, Ill.  
Rubberite—McIlroy Belting & Hose Co., Hammond, Ind.  
Ruboll—Ruboll Belting Co., Philadelphia, Pa.  
Ruby—American Belting Companies, Texas, Md.  
Salisbury & Co., Inc., W. H., Chicago, Ill.  
Sandow—Imperial Belting Co., Chicago, Ill.  
♦ Sawyer—United States Rubber Co., Mechanical Goods Div., New York.  
Smith, E. M., Co., Los Angeles, Cal.  
Special—Victor-Balata & Textile Belting Co., New York, N. Y.  
Senegal, Seminole, Cherokee—The Rossendale-Reddaway Belting & Hose Co., Newark, N. J.  
Stanwell—Fenwick-Reddaway Mfg. Co., Newark, N. J.  
Teon—D. P. Brown & Co., Philadelphia, Pa.  
Textol—Plutol—Neutol—The National Belting Co., Elyria, O.  
The Thermo-Gandy Belt—The Gandy Belting Co., Baltimore, Md.  
Trough-Con—Victor-Balata & Textile Belting Co., New York, N. Y.  
Victory—Victor-Balata & Textile Belting Co., New York, N. Y.

**BELTS, CENTRIFUGAL.**

Weston—American Tool & Machine Co., Boston, Mass.

**BELTING, CHAIN OR LINK.**

(See also "Chain, Transmission.")

American High Speed Chain Co., Indianapolis, Ind.  
Bartlett & Snow Co., C. O., Cleveland, O.  
Caldwell & Son Co., H. W., Chicago, Ill.  
♦ Chain Belt Co., Milwaukee, Wis.  
Codd Co., E. J., Baltimore, Md.  
Craig Mfg. Co., Cedar Rapids, Iowa.



- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Ewart—Link-Belt Co., Chicago and Philadelphia.
- Howe Chain Co., Muskegon, Mich.
- ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- ♦ Medart Patent Pulley Co., St. Louis, Mo.
- Morse Chain Co., Ithaca, N. Y.
- ♦ Page Belting Co., Concord, N. H.
- Peerless V Belt, Silent Chain V Belt—Bertschy Engineering Co., Cedar Rapids, Ia.
- Stowell Company, The, Milwaukee, Wis.
- Union Engineering Co., Cleveland, Ohio.
- ♦ Webster—Webster Mfg. Co., Chicago, Ill.
- Whitaker Mfg. Co., The, Chicago, Ill.

#### **BELTING, COMBINATION OF LEATHER, FABRIC, ETC.**

- Gutta Percha & Rubber Mfg. Co., New York.
- Innerduck—Hetrick Co., The, Toledo, O.
- McIlroy Belting & Hose Co., Hammond, La.
- Peerless Leather Faced—Peerless Belting Co., Gardenville, N. Y.
- Underwood—The Williams Summer Belting Co., Toland, Conn.
- Union—The Empire Mfg. Co., Lockport, N. Y.

#### **BELTING, CONCENTRATOR.**

- ♦ Boston Belting Corp., Boston, Mass.
- Crackproof—Pioneer Rubber Mills, San Francisco.
- Quaker City Rubber Co., Philadelphia, Pa.
- Spadone Edge—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- Vanner—W. E. Salisbury & Co., Inc., Chicago, Ill.

#### **BELTING, CONVEYOR AND ELEVATOR.**

(See also "Belting, Cotton, Solid," and Belting, Canvas Stitched.)

- Agrippa—Agrippa Mfg. Corp., New York, N. Y.
- Alfalpa—Burrell Belting Co., Chicago, Ill.
- Ajax—Gutta Percha Rubber Co., New York, N. Y.
- ♦ Akron—B. F. Goodrich Rubber Co., Akron, Ohio.
- ♦ Alpha—The American Belting Co., Baltimore, Md.
- Anacanda, Leviathan—Main Belting Co., Philadelphia, Pa.
- ♦ Arno, Hontas, Pacemaker—Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ♦ Atlas, Calumet & Black Diamond—Acme Belting Co., Niles, Mich.
- Azak, Carzak—The Carton Belting Co., Boston, Mass.
- ♦ B. F. G.—B. F. Goodrich Rubber Co., Akron, Ohio.
- ♦ Boston Belting Corp., Boston, Mass.
- Burmaline—Burrell Belting Co., Chicago, Ill.
- Carton—The Carton Belting Co., Boston, Mass.
- Clermont, Hi-Test, Hudson—Hudson Mechanical Rubber Co., New York.
- Consolidated Belting Co., Philadelphia, Pa.
- ♦ Conveyor—Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ♦ Cost Cutter—B. F. Goodrich Rubber Co., Akron, Ohio.
- ♦ Crown—Quaker City Rubber Co., Philadelphia, Pa.
- ♦ Damascus—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Desert—Quaker City Rubber Co., Philadelphia, Pa.
- Diamond Rubber Co., Inc., The, Akron, O. (Trade names—Diamond Tripper, Diamond Conv. Portage, Ore, Gravity.)
- Dick, R. & J., Co., Inc., Passaic, N. J.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Dominion—Dominion Asbestos and Rubber Corp., New York, N. Y.
- Economy—The B. F. Goodrich Rubber Co., Akron, O.
- ♦ Eleray, Grainrey—Diamond Rubber Co., Inc., Akron, O.
- Franklin—Franklin Cotton Mill Co., The, Cincinnati, O.
- Gandy Belting Co., The, Baltimore, Md.
- Gilmer—L. H. Gilmer Co., Philadelphia, Pa.
- Goodall Rubber Co., Inc., Philadelphia, Pa.
- ♦ Goodrich Rubber Co., B. F., Akron, O.
- ♦ Goodyear Tire & Rubber Co., Akron, O. Trade names—Cogan, Canning, Goodyear, Hytemp, Blue Streak, One Aeration, Klingtite.
- Grain Belt—The B. F. Goodrich Rubber Co., Akron, O.
- Gutta Percha & Rubber Mfg. Co., New York. Trade names, Circle, Four C, Hot Char, Special Elevator.
- ♦ Hamilton Rubber Mfg. Co., Trenton, N. J.
- Haslett Spiral Chute Co., Philadelphia, Pa.
- ♦ Hetrick Mfg. Co., Toledo, O.
- Hewitt Rubber Co., Buffalo, N. Y. Trade names—Dogwood, Karimor, Hollywood, Magnus.
- ♦ Iron Clad—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Kobold—Kobold Sales Co., New Orleans, La.
- ♦ Link-Belt Company, Chicago and Philadelphia.
- ♦ Long Life—The B. F. Goodrich Rubber Co., Akron, O.
- Main Belting Co., Philadelphia, Pa.
- Maltese Cross—Gutta Percha Rubber Mfg. Co., New York.
- ♦ Manhattan Rubber Mfg. Co., The, Passaic, N. J.
- Massco—Mine & Smelter Supply Co., Salt Lake City, Utah.
- ♦ Maxecon—The B. F. Goodrich Rubber Co., Akron, Ohio.
- Mt. Vernon Belting Co., Baltimore, Md.

- ♦ New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ♦ New York Belting & Packing Co., New York, N. Y.
- ♦ Olympia—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Ore Conveyor—Gutta Percha Rubber Mfg. Co., New York.
- Pennant—Olmsted Flint Co., Lawrence, Mass.
- Pioneer Rubber Mills, San Francisco, Calif.
- ♦ Python—Manheim Mfg. & Belting Co., Manheim, Pa.
- R. F. & C.—Buffalo Weaving & Belting Co., Buffalo.
- Regal—Maguire Rubber Co., New York, N. Y.
- Regent—Dominion Asbestos and Rubber Corp., New York.
- Reliance—Pioneer Rubber Mills, San Francisco, Cal.
- Rex—Chain Belt Co., Milwaukee, Wis.
- Rexall, Sahara, Anti-Sulpho, Submarine, Sanital, Sandow—Imperial Belting Co., Chicago, Ill.
- Rosendale-Reddaway Belting & Hose Co., The, Newark, N. J.
- Ruboll—Ruboll Belting Co., Philadelphia, Pa.
- Sahara—Imperial Belting Co., Chicago, Ill.
- Salisbury & Co., Inc., W. E., Chicago, Ill.
- ♦ Silver King—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Sovereign—Dominion Asbestos and Rubber Corp., New York.
- Special Black Leviathan—Main Belting Co., Philadelphia, Pa.
- ♦ Stanley Belting Corp., Chicago, Ill.
- Triangle D—Gutta Percha & Rubber Mfg. Co., New York.
- ♦ Ultimate—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ♦ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Granite, Peerless, Relio, Safety First Service, Sawyer, Shawmut, Silverton, Supremo, Thermoid.
- Victor-Balata & Textile Belting Co., New York.

#### **BELTING, CONVEYOR, WIRE.**

- Cyclone Fence Co., Waukegan, Ill.

#### **BELTING, COTTON, SOLID.**

- Agrippa—Agrippa Mfg. Corp., New York.
- Azak—The Carton Belting Co., Boston, Mass.
- Black & Tan, Multiple, Kotton Hyde—Peerless Belting Co., Gardenville, N. Y.
- Buffalo Weaving & Belting Co., Buffalo, N. Y.
- ♦ Burmaline—Burrell Belting Co., Chicago, Ill.
- ♦ Burro—United States Rubber Co., Mechanical Goods Div., New York.
- Climax—Fenwick-Reddaway Mfg. Co., Newark, N. J.
- Dana—Consolidated Belting Co., Philadelphia, Pa.
- Curry, Endless Woven—J. W. Curry Co., Cincinnati, O.
- Dumol—J. W. Buckley Rubber Co., New York, N. Y.
- Durbar—Rosendale-Reddaway Belting & Hose Co., The, Newark, N. J.
- Empire, Nubian—The Empire Mfg. Co., Lockport.
- Fabreeka—Fabreeka Belting Co., Boston, Mass.
- Farg—Branch Belting Supply Co., Lockport, N. Y.
- Gilmer—L. H. Gilmer Co., Philadelphia, Pa.
- Globe Woven Belting Co., Buffalo, N. Y.
- ♦ Grain King—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Higrade Belting & Weaving Co., Newark, N. J.
- Imperial Belting Co., Chicago, Ill.
- Interwoven—The Chesapeake Belting Co., Baltimore, Md.
- Jontex—National Leather Belting Co., New York, N. Y.
- Lenox—Russell Mfg. Co., Middletown, Conn.
- ♦ Milo—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Peerless Gilt Edge—Peerless Belting Co., Buffalo, N. Y.
- Perfect—Kingsley Mfg. Co., Indianapolis, Ind.
- R. F. & C.—Buffalo Weaving & Belting Co., Buffalo, N. Y.
- Rubberite—The McIlroy Belting & Hose Co., Hammond, Ind.
- Rusco—Russell Mfg. Co., Middletown, Conn.
- Russell—Russell Mfg. Co., Middletown, Conn.
- Salco—W. H. Salisbury & Co., Inc., Chicago, Ill.
- Scandinavia—Scandinavia Belting Co., Boston, Mass.
- Silver Edge—Peerless Belting Co., Gardenville, N. Y.
- Smith, Manning J., Belting Co., Germantown, Phila., Pa.
- Solot—The National Belting Co., Elyria, O.
- ♦ Soltex—Bonner & Barnewell, Inc., New York, N. Y.
- ♦ Stanley Belting Corp., Chicago, Ill.
- Summer Belting Co., The, William, Toland, Conn.
- Tilton—Arthur S. Brown Mfg. Co., Tilton, N. H.
- Tuftex—Rochester Woven Belting Corp., E. Rochester, N. Y.
- Urac—Union Rubber & Asbestos Co., Trenton, N. J.
- Vicking—Capen Belting Rubber Co., St. Louis, Mo.
- Victor-Balata & Textile Belting Co., New York, N. Y.
- Victor, Waterproof—The Franklin Cotton Mill Co., Cincinnati, O.
- Wooster—Duryea Mfg. Co., Bayonne, N. J.

**BELTING, EMERY AND FLINT.**

- ❖ Arno, Pacemaker—Cincinnati Rubber Co., Cincinnati, O.
- Armour Sand Paper Works, Chicago, Ill.
- ❖ Boston Belting Corp., Boston, Mass.
- ❖ Diamond—Diamond Rubber Co., Inc., Akron, Ohio.

**BELTING, FOODSTUFF CONVEYING.**

- Gilmer—L. H. Gilmer Co., Philadelphia, Pa.
- Sanital—Imperial Belting Co., Chicago, Ill.

**BELTING, FRICTION SURFACE.**

- Belting Company of Ohio, Cleveland, Ohio.
- ❖ Boston Belting Corp., Boston, Mass.
- Copper Queen—Pioneer Rubber Mills, San Francisco, Calif.
- Dominion—Dominion Asbestos and Rubber Corp., New York.
- Emsco—E. M. Smith Co., Los Angeles, Cal.
- ❖ Klingoid—Thermoid Rubber Co., Trenton, N. J.
- Kobold—Kobold Sales Co., New Orleans, La.
- Montgomery Bros., Inc., Philadelphia, Pa.
- ❖ Pacemaker, Arno—Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ❖ Perfection—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Regent—Dominion Asbestos and Rubber Corp., New York.
- Sagamore—Gutta Percha & Rubber Mfg. Co., New York.
- ❖ Security, Rainbow, Matchless, Four Ace, Pilot—U. S. Rubber Co., Mechanical Goods Div., New York.
- Sovereign—Dominion Asbestos and Rubber Corp., New York.
- Speed King—Dominion Asbestos and Rubber Corp., New York.

**BELTING, HAIR.**

- Arabian, Camel Hair—The Rossendale-Reddaway Belting & Hose Co., Newark, N. J.
- Iwana—Fenwick-Reddaway Mfg. Co., Newark, N. J.

**BELTING, LEATHER.**

- ❖ Acme—Bonner & Barnwell, Inc., New York, N. Y.
- Acme Chrome, Defiance—Norwich Belt Mfg. Co., Inc., Norwich, Conn.
- ❖ Acme—Eagle Counter & Leather Co., Cincinnati, O.
- Acorn—Buckeye Belting & Sup. Co., Cleveland, O.
- Acorn—Grand Rapids Belting Co., Grand Rapids, Mich.
- ❖ Agricultural, Perforated Electric, Rock Oak, Royal Extra, Dixie, Light Double—Chas. A. Schieren Co., New York.
- Ajax—W. D. Allen Mfg. Co., Chicago, Ill.
- Akron, Rival, Cascade, Perfection, Planer—The Akron Belting Co., Akron, O.
- Albany—Albany Belting & Supply Co., Albany, N. Y.
- Alenco—W. D. Allen Mfg. Co., Chicago, Ill.
- ❖ Alexander the Great, The Alexander—Alexander Bros., Philadelphia, Pa.
- Dumol—J. W. Buckley Rubber Co., New York, N. Y.
- Alligator Waterproof—Missouri Belting Co., St. Louis, Mo.
- Anhydrous Amalgum—Chas. L. Ireson, Boston, Mass.
- American Laminated Belting Co., New York, N. Y.
- ❖ Apex—N. Palmer & Co., Bridgeport, Conn.
- Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.
- American, Saxon, Niagara, Power—Johnson Belting Co., New York, N. Y.
- Aralays—Olmsted-Flint Co., Lawrence, Mass.
- Arm & Hammer—W. D. Allen Mfg. Co., Chicago, Ill.
- Arrow—W. D. Allen Mfg. Co., Chicago, Ill.
- Arrow—Cotton States Belting & Supply Co., Atlanta, Ga.
- ❖ Atlantic—Quaker City Rubber Co., Philadelphia, Pa.
- Atlantic—Schwartz Belting Co., New York, N. Y.
- Atlas Balata Belting Co., Philadelphia, Pa.
- Axiom—Shultz Belting Co., St. Louis, Mo.
- Axiom—Schwartz Belting Co., New York, N. Y.
- Bak-Bone—Geo. Rahmann & Co., New York, N. Y.
- Baltobelt—Baltimore Belting Co., Baltimore, Md.
- Barbroco—Barnum Bros. Co., Troy, N. Y.
- Barlow Bros., Philadelphia, Pa.
- Barnes, Henry K., Boston, Mass.
- Bay State—Bay State Belting Co., Boston, Mass.
- ❖ B. C. & D.—Bickford & Francis Belting Co., Buffalo, N. Y.
- B. & F.—Warren Belting Co., Worcester, Mass.
- Bennett-Dreyer Belting Co., St. Louis, Mo.
- ❖ Best Grade—Detroit Oak Belting Co., Detroit, Mich.
- Best Grade—H. H. Dickey & Son, Lewiston, Me.
- Billington, Jas. H., Co., Philadelphia, Pa.
- Black Diamond—Providence Belting Co., Providence, R. I.
- Blackstone, Congress—Bennett-Dreyer Belting Co., New York, N. Y.
- Blandin Co., Inc., Lawrence, Mass.
- ❖ Bonbar Reinforced—Bonner & Barnwell, Inc., New York.
- Bond, Charles Co., Philadelphia, Pa.
- Bono—Capen Belting & Rubber Co., St. Louis, Mo.
- Bridgeport—Bridgeport Belting Co., Bridgeport, Conn.

**W. H. Salisbury & Co., Inc.**

ESTABLISHED 1855

**Oldest Rubber House in the West**

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Brooklyn Leather Belting Co., Brooklyn, N. Y.  
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- ❖ Buckeye—I. B. Williams & Sons, Dover, N. H.
- ❖ Buffalo—Union Belt Co., Fall River, Mass.
- ❖ Bull's Head—Chas. A. Schieren Co., New York, N. Y.
- Bulldog—New York Leather Belting Co., New York, N. Y.
- Burr Oak—Burr Oak Belting Co., Cincinnati, O.
- ❖ Cairo—I. B. Williams & Sons, Dover, N. H.
- California Belting & Leather Co., Los Angeles, Calif.
- California Tanning Co., St. Louis, Mo.
- Capen's Regular—Capen Belting & Rubber Co., St. Louis, Mo.
- ❖ Casco—Chas. A. Schieren Co., New York, N. Y.
- Cascade—Laurence Belting Co., New York, N. Y.
- Centerback, Dur-Flex-Universal, Freadrich Belting Co., St. Louis, Mo.
- Central Belting Co., New York, N. Y.
- Century—Hartley-Rose Belting Co., Pittsburg, Pa.
- ❖ Champion—Bickford & Francis Belting Co., Buffalo.
- ❖ Charlotte Leather Belting Co., Charlotte, N. C.
- Trade names—Blue Ridge, Charlotte Oil Dressed, Clean Quality, Hosiery Mill Special, Obark, Piedmont, Packide, Special Spinning Belt, Waterproof, Loom Single, Whalebone.
- Charter Oak—N. Palmer & Co., Bridgeport, Conn.
- Chelsea—Ulmer Leather Co., The, Norwich, Conn.
- Chicago Belting Company, Chicago, Ill.
- Trade names—Imperial, Reliance, Sea Lion, Sterling.
- Chicago Rawhide Mfg. Co., Chicago, Ill.
- Cino—Mooney Belting Co., Cincinnati, O.
- Circle, International, Square, Triangle—Alexander Bros., Philadelphia.
- ❖ Clingstone—Bonner & Barnwell, Inc., New York, N. Y.
- Climax—N. Palmer & Co., Bridgeport, Conn.
- ❖ Coheco—I. B. Williams & Sons, Dover, N. H.
- ❖ Columbia—Edward R. Ladew Co., Inc., New York, N. Y.
- Columbus—Columbus Belting & Supply Co., Columbus, O.
- Comber—Geo. Rahman & Co., New York, N. Y.
- ❖ Concord—Page Belting Co., Concord, N. H.
- Cornelius Mill Furnishing Co., St. Louis, Mo.
- C B—Couse & Bolten, Newark, N. J.
- ❖ Cross Bros. & Co., Rochester, N. Y.
- ❖ Crown—Page Belting Co., Concord, N. H.
- Danforth—J. H. Bellington Co., Philadelphia, Pa.
- Davis-Scott Belting Co., Portland, Ore.
- ❖ Defiance—I. B. Williams & Sons, Dover, N. H.
- Dependable—Himmelsin & Bailey, Philadelphia, Pa.
- ❖ Desert—Quaker City Rubber Co., Philadelphia, Pa.



# SHINGLE LEATHER CO.

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- ◆ Detroit Velocity—Detroit Oak Belting Co., Detroit, Mich.
- ◆ Det-Co—Detroit Oak Belting Co., Detroit, Mich.
- ◆ Diamond—Buffalo Belting Wks., Buffalo, N. Y.
- ◆ Diamond—The W. S. Nott Co., Minneapolis, Minn.
- ◆ Dixie Planer—Bonner & Barnewall, Inc., New York, N. Y.
- ◆ Dixie Light Double—Chas. A. Schieren & Co., New York, N. Y.
- ◆ Dominion—Dominion Asbestos and Rubber Corp., New York.
- ◆ Double Edge—W. H. Salisbury & Co., Inc., Chicago.
- ◆ Druid Oak, Breakwater, Testus—Druid Oak Belting Co., Inc., The, Baltimore, Md.
- ◆ Duckwall Belting & Hose Co., Indianapolis, Ind.
- ◆ Duface—F. Raniville Co., Grand Rapids, Mich.
- ◆ Duplex—Barnum Bros. Co., Troy, N. Y.
- ◆ Durable, Double—New York Leather Belting Co., St. Louis, Mo.
- ◆ Duro—Capen Belting Rubber Co., St. Louis, Mo.
- ◆ Duxbak—Chas. Schieren Co., New York, N. Y.
- ◆ Dynamic—Pechin Belting Co., Philadelphia.
- ◆ Dynamo—Barnum Bros. Co., Troy, N. Y.
- ◆ Dynamo—Burr Oak Belting Co., Cincinnati, O.
- ◆ Dynamo—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Dynamo—Jewell Belting Co., Hartford, Conn.
- ◆ Dynamo—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Dynamo—W. S. Nott Co., Minneapolis, Minn.
- ◆ Dynamo—Union Belt Co., Fall River, Mass.
- ◆ Eagle—Eagle Packing & Rubber Co., New York, N. Y.
- ◆ Eagle—Chas. A. Schieren Co., New York, N. Y.
- ◆ Ebony Rawhide—Missouri Belting Co., St. Louis, Mo.
- ◆ Eclipse—Fairbanks-Morse & Co., Chicago, Ill.
- ◆ Edge-on—Capen Belting & Rubber Co., St. Louis, Mo.
- ◆ Essex—Laurence Belting Co., New York, N. Y.
- ◆ Eureka—California Belting & Supply Co., San Francisco, Cal.
- ◆ Eureka—Page Belting Co., Concord, N. H.
- ◆ Evansville Leather Belting Co., Evansville, Ind.
- ◆ Excelmo—Moval—Mobelt—Planer Double—Missouri Belting Co., St. Louis, Mo.
- ◆ Excelsior—William Coupe Corp., South Attleboro, Mass.
- ◆ Excelsior—Union Belt Co., Fall River, Mass.
- ◆ Exciter—McCauley Belting Co., Chicago, Ill.
- ◆ Extra—Jewell Belting Co., Hartford, Conn.
- ◆ Extra Heavy—Union Belt Co., Fall River, Mass.
- ◆ Extra Standard—Coe & Brown Co., New Haven, Conn.
- ◆ Extra Shortlap—Missouri Belting Co., St. Louis, Mo.
- ◆ Extra—W. S. Nott Co., Minneapolis, Minn.
- ◆ Fairbanks—Fairbanks Co., The, New York, N. Y.
- ◆ Fairbanks-Morse—Fairbanks-Morse & Co., Chicago, Ill.
- ◆ Fair Oaks—Hartley-Rose Belting Co., Pittsburg, Pa.
- ◆ Fensholt & Fechner, Chicago, Ill.
- ◆ First Choice—Meier-Andres Belting Co., Newark, N. J.
- ◆ Fisher Leather Belting Co., Inc., Philadelphia, Pa.
- ◆ Flat Fan—W. S. Nott Co., Minneapolis, Minn.
- ◆ Flexo—Cross Bros. Co., Inc., Rochester, N. Y.
- ◆ Flexite—F. Raniville Co., Grand Rapids, Mich.
- ◆ Flintstone—Edward R. Ladew Co., Inc., New York.
- ◆ Forster—John M. Forster Co., Rochester, N. Y.
- ◆ Foss & Bump, Springfield, Mass.
- ◆ Foulds, I., & Son, Hudson, Mass.
- ◆ Frictionclad—Quaker City Rubber Co., Philadelphia.
- ◆ Furniture City—Grand Rapids Belting Co., Grand Rapids, Mich.
- ◆ Gam Tan—F. Raniville Co., Grand Rapids, Mich.
- ◆ Giant—Plant Rubber Co., Minneapolis, Minn.
- ◆ Girard—Wise & Bailey, Philadelphia, Pa.
- ◆ Glen Cove—Edward R. Ladew Co., Inc., New York.
- ◆ Globe—Schwartz Belting Co., New York, N. Y.
- ◆ Golden State—H. N. Cook Belting Co., San Francisco, Cal.
- ◆ Gopher—S. R. Sikes Co., Minneapolis, Minn.
- ◆ Granite—Rahmann & Co., Geo., New York, N. Y.
- ◆ Grant—Plant Rubber Co., Minneapolis, Minn.
- ◆ Graton & Knight Mfg. Co., The, Worcester, Mass.
- ◆ Trade names—Gra-Knight Dynamo, Neptune Dynamo, Gra-Knight, Heart, Neptune, Spartan, Planer, Special, Royal Worcester, Spar Oak, Spar Oak Planer.
- ◆ Helms, Alex., Belting Co., San Francisco, Cal.
- ◆ Hendrie, W. C., Rubber Co., Torrance, Cal.
- ◆ Hercules—California Belting & Supply Co., San Francisco, Cal.
- ◆ Hercules—Wise & Bailey, Philadelphia, Pa.
- ◆ Hero, Water-Proof—The W. S. Nott Co., Minneapolis, Minn.
- ◆ Hervey, F. L., & Co., Inc., Fall River, Mass.
- ◆ Holyoke—Holyoke Belting Co., Holyoke, Mass.

- Houghton, E. F., Co., Philadelphia, Pa.
- Hudson Belting Co., Worcester, Mass. Trade names Climax, Planer, Ratan, Rival, Hudson's Extra.
- Hycalibre—Consolidated Belting Co., Philadelphia.
- Ideal—The Akron Belting Co., Akron, O.
- Illinois Mechanical Leather Co., Chicago, Ill.
- Imperial Belting Co., Chicago, Ill.
- ◆ Imperial—New York Leather Belting Co., New York, N. Y.
- Imperial—Taylor Belting Co., Indianapolis, Ind.
- Inner-Tex—W. H. Salisbury & Co., Chicago, Ill.
- Invincible—Homer Strong Co., Rochester, N. Y.
- Ireson, Chas. L., Boston, Mass.
- ◆ Jewell Chrome, Diver, Extra—Jewell Belting Co., Hartford, Conn.
- ◆ Johnson Belting Co., New York.
- ◆ King—Detroit Oak Belting Co., Detroit, Mich.
- ◆ Kromoke—Geo. Rahmann & Co., New York, N. Y.
- ◆ Laminated-Edge-On—Bonner & Barnewall, Inc., New York, N. Y.
- ◆ Lanning, Geo. W., Trenton, N. J.
- ◆ Lawrence Belting & Supply Co., Lawrence, Mass.
- ◆ Lawton, W. M., Utica, N. Y.
- ◆ Light—Jewell Belting Co., Hartford, Conn.
- ◆ Light Double—The Akron Belting Co., Akron, O.
- ◆ Live Oak—Eagle Counter & Leather Co., Cincinnati, Ohio.
- ◆ Long Life, Indian Tanned—W. S. Nott Co., Minneapolis, Minn.
- ◆ Long Run—Consolidated Belting Co., Philadelphia, Pa.
- ◆ Lucas—The Toledo Belting Co., Toledo, O.
- ◆ Lynch & Co., Edward, Chicago, Ill.
- ◆ McComb, Thomas, Wilmington, Del.
- ◆ MacWatty Belting Co., Providence, R. I.
- ◆ Magnet—Schwartz Belting Co., New York, N. Y.
- ◆ Malta—Capen Belting & Rubber Co., St. Louis, Mo.
- ◆ Maltese—Cross Bros. Co., Rochester, N. Y.
- ◆ Manhattan Velocity—Geo. Rahmann & Co., New York, N. Y.
- ◆ Marathon—New York Leather Belting Co., New York, N. Y.
- ◆ Maryland—American Belting Companies, Texas, Md.
- ◆ McL. Merrimack, Oakstok—F. W. McLanathan & Son, Lawrence, Mass.
- ◆ Matador—Ulmer Leather Co., Norwich, Conn.
- ◆ Meier's Sons, Joseph, Newark, N. J.
- ◆ Merrigold—Page Belting Co., Concord, N. H.
- ◆ Millrite—Wayne Belting Co., Fort Wayne, Ind.
- ◆ Milwaukee Leather Belting Co., Milwaukee, Wis.
- ◆ Mohawk, Standard—Albany Belting & Supply Co., New York, N. Y.
- ◆ Moloney Belting Co., Chicago, Ill. Trade names—M. Short Lap, Capitol, Dynamo, Special.
- ◆ Monarch—The Bradford Belting Co., Cincinnati, O.
- ◆ Montgomery Belting & Supply Co., Norristown, Pa.
- ◆ Muel—Page Belting Co., Concord, N. H.
- ◆ Mule—Ulmer Leather Co., Norwich, Conn.
- ◆ Nappa—Henry F. Whiting, Lowell, Mass.
- ◆ Nashville Belting Co., Nashville, Tenn.
- ◆ Ne-Pac—Capen Belting & Rubber Co., St. Louis, Mo.
- ◆ Niagara—Buffalo Belting Wks., Buffalo, N. Y.
- ◆ No Fly Red—W. H. Salisbury & Co., Chicago, Ill.
- ◆ Norke—The Akron Belting Co., Akron, O.
- ◆ North Side Leather Belting Co., Inc., New York, N. Y.
- ◆ Nott's Extra—Nott Co., W. S., Minneapolis, Minn.
- ◆ Oak Tan—Chas. A. Schieren & Co., New York, N. Y.
- ◆ Oakwood—Byrnes Belting Co., St. Louis, Mo.
- ◆ Oko—F. Raniville Co., Grand Rapids, Mich.
- ◆ Old Hickory—American Belting Companies, Texas, Md.
- ◆ Old Oak—National Leather Belting Co., New York.
- ◆ Old Reliable—Wise & Bailey, Philadelphia, Pa.
- ◆ Pacemaker—Olmsted-Flint Co., Cambridge, Mass.
- ◆ Pacific—Schwartz Belting Co., New York, N. Y.
- ◆ Palmer's Extra—N. Palmer & Co., Bridgeport, Conn.
- ◆ Paulus, Jos. C., Philadelphia, Pa.
- ◆ Peerless—New York Leather Belting Co., New York, N. Y.
- ◆ Peerless—Peerless Belting Co., Buffalo, N. Y. (Leather faced fabric.)
- ◆ Pequoit—Holyoke Belting Co., Holyoke, Mass.
- ◆ Perfection—Bonner & Barnewall, Inc., New York, N. Y.
- ◆ Perfection—Homer Strong, Rochester, N. Y.
- ◆ Philadelphia Belting Co., Philadelphia, Pa.
- ◆ Philkob—James I. Brown, New York.
- ◆ Phoenix, Motor and Dynamo—New York Leather Belting Co., New York, N. Y.
- ◆ Planer—Andrew Cowan & Co., Inc., Louisville, Ky.
- ◆ Plantation—American Belting Companies, Texas, Md.
- ◆ Plymouth—California Belting & Supply Co., San Francisco, Cal.
- ◆ Pocono—Wise & Bailey, Philadelphia, Pa.
- ◆ Porpoise—National Leather Belting Co., New York.
- ◆ Portland Rubber Mills, Portland, Ore.
- ◆ Pure Oak—H. H. Dickey & Son, Lewiston, Me.
- ◆ Pure Oak—Grand Rapids Belting Co., Grand Rapids, Mich.
- ◆ Pure Oak—Shultz Belting Co., St. Louis, Mo.
- ◆ P. Q. Q.—Caldwell Belting & Mfg. Co., St. Louis, Mo.
- ◆ Pyramid—A. C. Laurence, New York, N. Y.
- ◆ Raniwillized—F. Raniville Co., Grand Rapids, Mich.
- ◆ Regal—Regal Belting Co., Cincinnati, O.
- ◆ Reinhold Belting & Supply Co., Brooklyn, N. Y.
- ◆ Reliable—Andrew Cowan & Co., Inc., Louisville, Ky.

Rex—Barnum Bros. Co., Troy, N. Y.  
 ♦ Rex—The W. S. Nott Co., Minneapolis, Minn.  
 ♦ Rhinoceros—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Rhoads, J. E. & Sons, Philadelphia, Pa. Trade names—Gilt Edge, Grip-O-Tan, Service, Stronghold, Tannate, Tannate Cone, Tescone, Volta Dynamo.  
 ♦ Rock Oak—Chas. A. Schieren & Co., New York.  
 ♦ Royal—Barnum Bros. Co., Troy, N. Y.  
 ♦ Royal Extra, Oak Bark—Chas. A. Schieren & Co., New York.  
 ♦ Royal Oak—Smyth-Despard Co., Utica, N. Y.  
 ♦ Royal, Extra—Chas. A. Schieren & Co., New York.  
 ♦ Royal Standard—J. Bachmann & Co., New York.  
 ♦ Sabre—McCauley Belting Co., Chicago, Ill.  
 ♦ Sable—Shultz Belting Co., St. Louis, Mo.  
 ♦ Sachem—The Ulmer Leather Co., Norwich, Conn.  
 ♦ Sagamore—Narragansett Belting Co., Providence, R. I.  
 ♦ Samson—Bickford & Francis Belting Co., Buffalo, N. Y.  
 ♦ Salisbury Light Double—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Saxon—Byrnes Belting Co., St. Louis, Mo.  
 ♦ Schieren, Chas. A., Co., New York, N. Y.  
 ♦ Schwartz Belting Co., New York, N. Y. Trade names—Emork, H-Q-O, Kromeax.  
 ♦ Sea Dog—American Belting Companies, Texas, Md.  
 ♦ Shield—McCauley Belting Co., Chicago, Ill.  
 ♦ Shingle—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Shops—Rose Valley Shops, Moylan-Rose Valley, Pa.  
 ♦ Short Lap—Capen Belting & Rubber Co., St. Louis, Mo.  
 ♦ Sikes & Co., S. R., Minneapolis, Minn.  
 ♦ Sioux—Colonial Leather Co., Chicago, Ill.  
 ♦ Southern Belting Co., Atlanta, Ga.  
 ♦ Southern King—W. S. Nott Co., Minneapolis, Minn.  
 ♦ Special Planer—Burr Oak Belting Co., Cincinnati, O.  
 ♦ Special—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Special Planer—The W. S. Nott Co., Minneapolis, Minn.  
 ♦ Special Planer—W. H. Salisbury & Co., Inc., Chicago.  
 ♦ Special Spindle—Bonner & Barnewell, Inc., New York, N. Y.  
 ♦ Special Tanned—W. S. Nott Co., Minneapolis, Minn.  
 ♦ Special Woodworking—Bonner & Barnewell, Inc., New York, N. Y.  
 ♦ Spindle City—Henry D. Whiting, Lowell, Mass.  
 ♦ Springfield Belting & Supply Co., The, Springfield, Mass.  
 ♦ Square Deal—Burr Oak Belting Co., Cincinnati, O.  
 ♦ Standard—American Belting Companies, Texas, Md.  
 ♦ Standard—Moloney Belting Co., Chicago.  
 ♦ Standard—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Star—L. P. Degen Belting Co., San Francisco, Cal.  
 ♦ Star—Fairbanks Morse & Co., Chicago, Ill.  
 ♦ Star—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Steer—McCauley Belting Co., Chicago, Ill.  
 ♦ Steer—Joseph Meier's Sons, Newark, N. J.  
 ♦ Steerstok—Olmsted-Flint Co., Cambridge, Mass.  
 ♦ Sterling Lehigh—Charles Bond Co., Philadelphia, Pa.  
 ♦ Sunset—L. P. Degen Belting Co., San Francisco, Cal.  
 ♦ Superior Leather Belting Co., New York. Trade names—Nonpareil, Paramount, Superoak.  
 ♦ Superior—Western Rawhide & Belting Co., Milwaukee, Wis.  
 ♦ Superior Oak—Andrew Cowan & Co., Inc., Louisville, Ky.  
 ♦ Supple—Schwartz Belting Co., New York, N. Y.  
 ♦ Tan-Rex—Barnum Bros. Co., Troy, N. Y.  
 ♦ Tarpon—Page Belting Co., Concord, N. H.  
 ♦ Tenacity—Geo. Rahmann & Co., New York, N. Y.  
 ♦ Tiger—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Tiger—Andrew Cowan & Co., Inc., Louisville, Ky.  
 ♦ Titan—Hudson Belting Co., Worcester, Mass.  
 ♦ Toughhide—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Trojan—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ True Brand—Smyth-Despard Co., Utica, N. Y.  
 ♦ True Oak—Smyth-Despard Co., Utica, N. Y.  
 ♦ Turner, J. S., Mfg. Co., Lowell, Mass.  
 ♦ Uncas—The Ulmer Leather Co., Norwich, Conn.  
 ♦ Union—Union Belt Co., Fall River, Mass.  
 ♦ Unitan—Norwich Belt Mfg. Co., Inc., Norwich, Conn.  
 ♦ U. S.—Reed & Duecker, Memphis, Tenn.  
 ♦ Utli—Smyth-Despard Co., Utica, N. Y.  
 ♦ Van Riper Mfg. Co., Paterson, N. J.  
 ♦ V.-C.—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Velvet—W. T. Shackley & Son Co., Boston, Mass.  
 ♦ Velap, Ollskin, Velap Winder—Olmsted-Flint Co., Cambridge, Mass.  
 ♦ Velocity—Olmsted-Flint Co., Cambridge, Mass.  
 ♦ V. Shape—W. S. Nott Co., Minneapolis, Minn.  
 ♦ Viking—Shultz Belting Co., St. Louis, Mo.  
 ♦ Viscoproof—Henry F. Whiting, Lowell, Mass.  
 ♦ Volt—Hide Leather & Belting Co., Indianapolis, Ind.  
 ♦ Vulcanite—The Chicago Rawhide Mfg. Co., Chicago, Ill.  
 ♦ Walker's Sons & Co., Chas. W., Newark, N. J.  
 ♦ Walous Waterproof—F. S. Converse Co., Johnson City, N. Y.  
 ♦ Warren Belting Co., Worcester, Mass.  
 ♦ Wateride—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Waterproof—Grand Rapids Belting Co., Grand Rapids, Mich.  
 ♦ Waterproof—Shultz Belting Co., St. Louis, Mo.

Waterproof—Warren Belting Co., Worcester, Mass.  
 ♦ Watershed—J. E. Rhoads & Sons, Philadelphia, Pa.  
 ♦ Waterwitch—N. Palmer & Co., Bridgeport, Conn.  
 ♦ Weatherhead-Thompson Co., Pawtucket, R. I.  
 ♦ Webb Bros. Belting Co., Kansas City, Mo.  
 ♦ Wetprufe—Hide & Leather Belting Co., Indianapolis, Ind.  
 ♦ Weymouth—Wise & Bailey, Philadelphia, Pa.  
 ♦ White Strip—The Chicago Belting Co., Chicago, Ill.  
 ♦ Wilby, Wm., Estate, Lowell, Mass.  
 ♦ Windsor X—American Belting Companies, Texas, Md.  
 ♦ Wissahickon—J. H. Beltington Co., Philadelphia, Pa.  
 ♦ Wolverine—Planer—Detroit Oak Belting Co., Detroit, Mich.  
 ♦ "Wonder-Tan"—F. W. McLanathan & Son, Lawrence, Mass.  
 ♦ Woodcock Bros., Chicago, Ill.  
 ♦ Wood-working—Union Belt Co., Fall River, Mass.  
 ♦ Woonsocket Supply Co., Woonsocket, R. I.  
 ♦ Zenith—Jewell Belting Co., Hartford, Conn.  
 ♦ Zim—Conrad Zimmer Belting Co., New York, N. Y.

**BELTING, LEATHER, LINK.**

♦ American Joint—Chas. A. Schieren Co., New York.  
 ♦ Page Belting Co., Concord, N. H.  
 ♦ Philadelphia Belting Co., Philadelphia, Pa.

**BELTING, LEATHER, RAWHIDE.**

Chicago Rawhide Co., The, Chicago, Ill.  
 Coupe, Wm., Co., South Attleboro, Mass.  
 ♦ Giant—Missouri Belting Co., St. Louis, Mo.  
 ♦ Hunt Co., Henry C., Boston, Mass.  
 ♦ Page Belting Co., Concord, N. H.  
 ♦ Sable—Shultz Belting Co., St. Louis, Mo.  
 ♦ Western Rawhide & Belting Co., Milwaukee, Wis.  
 ♦ White Strip—Chicago Belting Co., Chicago, Ill.

**BELTING, LEATHER, ROUND AND TWIST.**

♦ Acorn—Graton & Knight Mfg. Co., Worcester, Mass.  
 ♦ Alexander Brothers, Philadelphia, Pa.  
 ♦ Black Diamond—Jewell Belting Co., Hartford, Conn.  
 ♦ Bridgeport—Bridgeport Belting Co., Bridgeport, Conn.  
 ♦ Bull Dog—Illinois Mechanical Leather Co., Chicago, Ill.  
 ♦ Central Belting Co., New York, N. Y.  
 ♦ Chicago Rawhide Co., The, Chicago, Ill.  
 ♦ Comber—Geo. Rahmann & Co., New York, N. Y.  
 ♦ Crown—Page Belting Co., Concord, N. H.  
 ♦ Diamond State, Tannate—J. E. Rhoads & Sons, Philadelphia, Pa.  
 ♦ Duxbak—Chas. A. Schieren & Co., New York.  
 ♦ Ebony—Missouri Belting Co., St. Louis, Mo.  
 ♦ Freadrigh Belting Co., St. Louis, Mo.  
 ♦ Gilt Edge—L. B. Williams & Sons, Dover, N. H.  
 ♦ Grand Rapids Belting Co., Grand Rapids, Mich.  
 ♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 ♦ Hindu—Druid Oak Belting Co., Inc., The, Baltimore, Md.  
 ♦ Holyoke—Holyoke Belting Co., Holyoke, Mass.  
 ♦ Hoyt's—Edward R. Ladew Co., Inc., Glen Cove, N. Y.  
 ♦ Hudson Belting Co., Worcester, Mass.  
 ♦ Johnson Belting Co., New York, N. Y.  
 ♦ McL—F. W. McLanathan & Son, Lawrence, Mass.  
 ♦ MacWatty Belting Co., Providence, R. I.  
 ♦ Monarch—Bradford Belting Co., Cincinnati, O.  
 ♦ Olotan—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Ox-Hide—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Page Belting Co., Concord, N. H.  
 ♦ Patent—New York Leather Belting Co., New York.  
 ♦ Pequot—Holyoke Belting Co., Holyoke, Mass.  
 ♦ Philadelphia Belting Co., Philadelphia, Pa.  
 ♦ Phoenix Oak—New York Leather Belting Co., Brooklyn, N. Y.  
 ♦ Rahmann & Co., Geo., New York, N. Y.  
 ♦ Red Seal—National Leather Belting Co., New York.  
 ♦ Reinhold Belting Supply Co., Brooklyn, N. Y.  
 ♦ Reliance—Chicago Belting Co., Chicago, Ill.  
 ♦ Shultz Belting Co., St. Louis, Mo.  
 ♦ Solid—New York Leather Belting Co., New York, N. Y.  
 ♦ Spartan—Graton & Knight Mfg. Co., Worcester, Mass.  
 ♦ Star—F. Ranville Co., Grand Rapids, Mich.  
 ♦ Sumner Belting Co., The William, Tolland, Conn.  
 ♦ Superior—Western Rawhide & Belting Co., Milwaukee, Wis.  
 ♦ Tannate—J. E. Rhoads & Sons, Philadelphia, Pa.  
 ♦ Turner, J. S., Mfg. Co., Lowell, Mass.  
 ♦ Ve-Single—F. Ranville Co., Grand Rapids, Mich.

**BELTING, LEATHER, STEAM PROOF.**

♦ Duxbak Nutan—Chas. A. Schieren & Co., New York, N. Y.  
 ♦ Rahmann, Geo. & Co., New York, N. Y.  
 ♦ Shultz Belting Co., St. Louis, Mo.

**BELTING, LEATHER, WATER PROOF.**

♦ Alexander Dreadnaut—Alexander Bros., Philadelphia, Pa.  
 ♦ Alligator—Missouri Belting Co., St. Louis, Mo.  
 ♦ Alpha, Emral—The Ulmer Leather Co., Norwich, Conn.

Aqua—Shultz Belting Co., St. Louis, Mo.  
 Ark—Philadelphia Belting Co., Philadelphia, Pa.  
 ♦ Arolap—Ollskin—Olmsted-Flint Co., New York.  
 Auk—Buckeye Belting & Sup. Co., Cleveland, O.  
 ♦ Blue Stone—W. S. Nott Co., Minneapolis, Minn.  
 Bickford & Francis Belting Co., Buffalo, N. Y.  
 ♦ Bradford—Bradford Belting Co., Cincinnati, Ohio.  
 C B—Couse & Bolten, Newark, N. J.  
 ♦ Chrome—Jewell, Waterproof—Jewell Belting Co., Hartford, Conn.  
 Chrome Tan—Shultz Belting Co., St. Louis, Mo.  
 Comber, Kontak, Kromoke—Geo. Rahmann & Co., New York.  
 Consolidated Belting Co., Philadelphia, Pa.  
 Degen's—L. P. Degan Belting Co., San Francisco, Cal.  
 ♦ Diver—Jewell Belting Co., Hartford, Conn.  
 Dolphin, Grip Pulley—H. C. Cook Belting Co., San Francisco, Cal.  
 ♦ Duxbak—Chas. A. Schieren & Co., New York, N. Y.  
 ♦ Dynamo, Planer, Wettite—New York Leather Belting Co., New York, N. Y.  
 ♦ Eagle Counter & Leather Co., Cincinnati, O.  
 Empire Union—The Empire Mfg. Co., Lockport, N. Y.  
 Extractor—Andrew Cowan & Co., Inc., Louisville, Ky.  
 Fish—Ulmer Leather Co., Norwich, Conn.  
 ♦ Graton & Knight Mfg. Co., The, Worcester, Mass.  
 Trade names—Neptune, Neptune Dynamo, Spartans, Spar Oak, Spar Oak Planer.  
 H. & B.—Hummel & Bailey, Philadelphia, Pa.  
 H-2-O—Schwartz Belting Co., New York, N. Y.  
 Hippo—J. Bachmann & Co., New York, N. Y.  
 Hippo—Reed & Duecker, Memphis, Tenn.  
 Hydro, Mermaid—Hudson Belting Co., Worcester, Mass.  
 Imperial, Mohawk—Plant Rubber Co., Minneapolis, Minn.  
 Keystone—Montgomery Belting & Supply Co., Norristown, Pa.  
 K-O (Chrome Oak)—Eagle Counter & Leather Co., Cincinnati, O.  
 Lea-Duck—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 MacWatty Belting Co., Providence, R. I.  
 ♦ Marine—McCauley Belting Co., Chicago, Ill.  
 Matador—Ulmer Leather Co., The, Norwich, Conn.  
 Mermaid—Leather Preserver Mfg. Co., Chicago, Ill.  
 ♦ Nalad—Detroit Oak Belting Co., Detroit, Mich.  
 Navy Special Baltimore Belting Co., Baltimore, Md.  
 Ne-Pac Extra—Capen Belting & Rubber Co., St. Louis, Mo.  
 Oakwood—H. N. Cook Belting Co., San Francisco, Cal.  
 ♦ Ollskin—Olmsted-Flint Co., Cambridge, Mass.  
 ♦ Oro—Bonner & Barnwell, Inc., New York, N. Y.  
 Philadelphia Belting Co., Philadelphia, Pa.  
 Porpoise—National Leather Belting Co., New York, N. Y.  
 Progress—H. N. Cook Belting Co., San Francisco, Cal.  
 Pure Oak—S. R. Sikes Co., Minneapolis, Minn.  
 ♦ Rextan—Bonner & Barnwell, Inc., New York, N. Y.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.  
 ♦ Sea Lion—Chicago Belting Co., Chicago, Ill.  
 Seal—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Sealskin—Burr Oak Belting Co., Cincinnati, O.  
 Shellite—I. B. Williams & Sons, Dover, N. H.  
 Shultz Belting Co., St. Louis, Mo.  
 Special—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Storm King—Meir-Andres Belting Co., Newark, N. J.  
 Submarine—Holyoke Belting Co., Holyoke, Mass.  
 Submarine—Montgomery Belting & Supply Co., Norristown, Pa.  
 Tenacity—Geo. Rahmann & Co., New York, N. Y.  
 Toughide—F. Raniville Co., Grand Rapids, Mich.  
 Trojan—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Trout—Omega—Shultz Belting Co., St. Louis, Mo.  
 ♦ Turtle—Edward R. Ladew Co., Inc., Glen Cove, N. Y.  
 Ulcotan—Ulmer Leather Co., Norwich, Conn.  
 Ute—Smyth-Despard Co., Utica, N. Y.  
 ♦ V-Belting—Detroit Oak Belting Co., Detroit, Mich.  
 Vulcanite Adhesive—Colonial Leather Co., Chicago, Ill.  
 Vulcanite Krome—Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Walrus—Narragansett Belting Co., Providence, R. I.  
 Warren Belting Co., Worcester, Mass.  
 Waterbury Leather Belting Co., Waterbury, Conn.  
 Wateride—F. Raniville Co., Grand Rapids, Mich.  
 Watertite—Plant Rubber Co., Minneapolis, Minn.  
 Water King—Bay State Belting Co., Boston, Mass.  
 Water King—Central Belting Co., New York, N. Y.  
 Water King—Chicago Belting Co., Chicago, Ill.  
 Waterproof—Grand Rapids Belting Co., Grand Rapids, Mich.  
 Water-Test—Conrad Zimmer Belting Co., New York, N. Y.  
 Rhoads, J. E., & Sons, Philadelphia, Pa. Trade names—Watershed Grip-O-Tan, Watershed Oak, Watershed Tannate.  
 Watershed, Oak Tannate, Grip-O-Tan—J. E. Rhoads & Sons, Philadelphia, Pa.  
 Watertite—Plant Rubber Co., Minneapolis, Minn.  
 Waterwitch—Smyth-Despard Co., Utica, N. Y.  
 Waterwitch—N. Palmer & Co., Bridgeport, Conn.  
 Wetprufe—Hide Leather & Belting Co., Indianapolis, Ind.  
 Wetstone—W. S. Nott Co., Minneapolis, Minn.  
 Whale—Moloney Belting Co., Chicago, Ill.

Whalebak—Superior Leather Belting Co., New York, N. Y.  
 ♦ White Strip—Chicago Belting Co., Chicago, Ill.  
 ♦ Williams, I. B. & Sons, Dover, N. H.  
 Wonder Tan—F. W. McLanathan & Son, Lawrence, Mass.  
 XXX—Hummel & Bailey, Philadelphia, Pa.

#### BELTING, OIL WELL.

♦ B. F. G.—B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Boston Belting Corp., Boston, Mass.  
 ♦ Consolidated Belting Co., Philadelphia, Pa.  
 ♦ Diamond Rubber Co., Inc., Akron, O. Trade names—Alpha, Dirubco, Gusher, Omega, Titan.  
 Dominion—Dominion Asbestos and Rubber Corp., New York, N. Y.  
 ♦ Giant—United States Rubber Co., Mechanical Goods Div., New York.  
 ♦ Oil Field—B. F. Goodrich Rubber Co., Akron, O.  
 O & G—Imperial Belting Co., Chicago, Ill.  
 ♦ Pawnee, Consul—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Stanley Belting Corporation, Chicago, Ill.  
 ♦ Sterling—B. F. Goodrich Rubber Co., Akron, O.

#### BELTING, POLISHING.

Ames Sword Co., Chicopee, Mass.  
 ♦ Boston Belting Corp., Boston, Mass.  
 ♦ Chicago Rawhide Co., The, Chicago, Ill.  
 Consolidated Belting Co., Chester, Pa.  
 Curry, J. W. Co., Cincinnati, O.  
 ♦ Diamond Rubber Co., Inc., Akron, O.  
 Gilmer—L. H. Gilmer Co., Philadelphia, Pa.  
 Goodrich Co., The B. F., Akron, O.  
 Home Rubber Co., Trenton, N. J.  
 Hudson Belting Co., Worcester, Mass.  
 ♦ Page Belting Co., Concord, N. H.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York.

#### BELTING, ROPE.

(See "Rope, Transmission.")

#### BELTING, RUBBER.

Acme—The Acme Rubber Mfg. Co., Trenton, N. J.  
 Acme Seamless—The Akron Belting Co., Akron, O.  
 Admiral—Capen Belting & Rubber Co., St. Louis, Mo.  
 Alabama—Empire Rubber & Tire Co., Trenton, N. J.  
 ♦ Alpha—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 ♦ American—Voorhees Rubber Mfg. Co., Jersey City.  
 Anchor Packing Co., The, Philadelphia, Pa.  
 Anchor Packing Co., The, Philadelphia, Pa.  
 Apex—W. H. Salisbury & Co., Chicago, Ill.  
 Aqua—J. W. Buckley Rubber Co., New York, N. Y.  
 ♦ Arcadia—New Jersey Car Spring & Rubber Co., Jersey City, N. J.  
 ♦ Arno—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Beaver—Mechanical Rubber Co., Chicago, Ill.  
 Bengal—The Mechanical Rubber Co., Chicago, Ill.  
 Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Bloomfield—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 ♦ Blue Streak—Goodyear Tire & Rubber Co., Akron, O.  
 ♦ Boston—Boston Belting Corp., Boston, Mass.  
 ♦ Broncho—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Buckley Rubber Co., J. W., New York, N. Y.  
 Buffalo Weaving & Belting Co., Buffalo, N. Y.  
 ♦ Byrnes Belting Co., St. Louis, Mo.  
 ♦ Canvas Stitched—The Manhattan Rubber Mfg. Co., New York, N. Y.  
 ♦ Carspring—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.  
 ♦ Charlot—The Republic Rubber Co., Youngstown, O.  
 Clermont—Hudson Mechanical Rubber Co., New York.  
 ♦ Clifton—New York Belting & Packing Co., New York, N. Y.  
 Colonial—Capen Belting Rubber Co., St. Louis, Mo.  
 ♦ Combination—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 ♦ Commander—The B. F. Goodrich Rubber Co., Akron, O.  
 Concentrator—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Condon—The Manhattan Rubber Mfg. Co., Passaic, N. J.  
 Congress—Maguire Rubber Co., New York, N. Y.  
 Conomic—Union Rubber & Asbestos Co., Trenton, N. J.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Consolidated Rubber Co., Trenton, N. J.  
 Conveyor—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Copper Queen—Pioneer Rubber Mills, San Francisco, Cal.  
 Corduroy—Salisbury & Co., Inc., W. H., Chicago, Ill.  
 ♦ Criterion—Voorhees Rubber Mfg. Co., Jersey City, N. J.

- ◆ Crown—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Czar—New York Belting & Packing Co., New York, N. Y.
- ◆ Defiance, Griptite, Diamond—Diamond Rubber Co., Inc., Akron, O.
- ◆ Defiance—Crescent Belting & Packing Co., Trenton, N. J.
- ◆ Delhi—The Manhattan Rubber Mfg. Co., Passaic, N. J.
- ◆ Dogwood—Hewitt Rubber Co., Buffalo, N. Y.
- ◆ Dominion—Dominion Asbestos and Rubber Corp., New York, N. Y.
- ◆ Double Diamond—New York Belting & Packing Co., York, N. Y.
- ◆ Drake—Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ Double Diamond—New York Belting & Packing Co., Ltd., New York, N. Y.
- ◆ Dragon—New York Belting & Packing Co., New York, N. Y.
- ◆ Dundee—New York Belting & Packing Co., New York, N. Y.
- ◆ Durable—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ◆ Eagle—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ◆ Edgewater—Quaker City Rubber Co., Jeanette, Pa.
- ◆ Efficient—Maguire Rubber Co., New York, N. Y.
- ◆ 1846 Para—New York Belting & Packing Co., Ltd., New York, N. Y.
- ◆ Eldorado—Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ Electric—Wise & Bailey, Philadelphia, Pa.
- ◆ Elrey—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Emblem—Maguire Rubber Co., New York, N. Y.
- ◆ Empire—Empire Tire & Rubber Corp., Trenton, N. J.
- ◆ Empire Red—Empire Tire & Rubber Corp., Trenton, N. J.
- ◆ Emsco—E. M. Smith Co., Los Angeles, Cal.
- ◆ Federal—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ◆ Flex-Metallic—W. H. Salisbury & Co., Chicago, Ill.
- ◆ Franklin—Wise & Bailey, Philadelphia, Pa.
- ◆ Fulton—Hudson Mechanical Rubber Co., New York, N. Y.
- ◆ Gem—Mulconroy Co., Inc., Philadelphia, Pa.
- ◆ Girard—Wise & Bailey, Philadelphia, Pa.
- ◆ Gladiator—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ◆ Glide—Goodyear Tire & Rubber Co., Akron, O.
- ◆ Globe—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Gold Dredge—New York Belting & Packing Co., New York, N. Y.
- ◆ Golden Gate—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Goodal Rubber Co., Inc., Philadelphia, Pa.
- ◆ Goodyear Tire & Rubber Co., Akron, O.
- ◆ Great Seal—New York Belting & Packing Co., New York, N. Y.
- ◆ Gulf—The Diamond Rubber Co., Inc., Akron, O.
- ◆ Gutta, Percha & Rubber Mfg. Co., New York, Trade names, High Speed, Manitou, Seneca, Wallabout.
- ◆ Hamilton Rubber Mfg. Co., Trenton, N. J.
- ◆ Hector—The Republic Rubber Co., Youngstown, O.
- ◆ Hercules—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Hero—Mulconroy Co., Inc., Philadelphia, Pa.
- ◆ Hero—Empire Tire & Rubber Corp., Trenton, N. J.
- ◆ Hevea—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Hewitt—Hewitt Rubber Co., Buffalo, N. Y. Trade names—Dogwood, Hollywood, Navajo, Magnus, Hewitt Heavy Duty, Triple H Lightning High Speed.
- ◆ Hi-Heat—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Hi-Test Hudson—Hudson Mechanical Rubber Co., New York, N. Y.
- ◆ Hog Beater—Maguire Rubber Co., New York, N. Y.
- ◆ Hollywood—Hewitt Rubber Co., Buffalo, N. Y.
- ◆ Home Rubber Co., Trenton, N. J. Trade names—Black Seal, Jumbo, Old Glory, Tiger, White Cross, World.
- ◆ Hontas—The Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
- ◆ Husky—Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ Hydraulic—J. W. Buckley Rubber Co., New York.
- ◆ Ideal Seamless—The Akron Belting Co., Akron, O.
- ◆ Imperial Belting Co., Chicago, Ill.
- ◆ Indestructene—The Combination Rubber Mfg. Co., Bloomfield, N. J.
- ◆ Indian Red—The Diamond Rubber Co., Inc., Akron, Ohio.
- ◆ International—The Manhattan Rubber Mfg. Co., Passaic, N. J.
- ◆ Ironsides—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Johnson Co., The Henry, Jersey City, N. J.
- ◆ King—Empire Tire & Rubber Corp., Trenton, N. J.
- ◆ Kingfisher—The Strong Machinery & Supply Co., New York, N. Y.
- ◆ Klingtite—Goodyear Tire & Rubber Co., Akron, O.
- ◆ Kobold—Kobold Sales Co., New Orleans, La.
- ◆ Kortlandt—The Manhattan Rubber Mfg. Co., Passaic, N. J.
- ◆ Lamina Construction—Manhattan Rubber Co., Passaic, N. J.
- ◆ Live Oak—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Long Life—Goodrich Rubber Co., B. F., Akron, O.
- ◆ Lynx—The Diamond Rubber Co., Inc., Akron, O.
- ◆ Magic—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Magnet—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Magnus—Hewitt Rubber Co., Buffalo, N. Y.
- ◆ Maltese Cross—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Marathon—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Maron—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Mercer Rubber Co., Hamilton Square, N. J.
- ◆ Model—Empire Rubber & Tire Co., Trenton, N. J.
- ◆ Model—Mulconroy Co., Inc., Philadelphia, Pa.
- ◆ Mohawk—Gutta Percha & Rubber Mfg. Co., New York.
- ◆ Monitor—Empire Rubber & Tire Co., Trenton, N. J.
- ◆ Monitor—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Montana Brand—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Moose—The Diamond Rubber Co., Inc., Akron, O.
- ◆ M. R. Co.—Maguire Rubber Co., New York, N. Y.
- ◆ Navajo—Hewitt Rubber Co., Buffalo, N. Y.
- ◆ Nemo—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Ne-Pac—Capen Belting & Rubber Co., St. Louis, Mo.
- ◆ Non Separable—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Oil Well—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Old Reliable—Wise & Bailey, Philadelphia, Pa.
- ◆ Orinoca—L. G. Isaacson Co., Inc., Aberdeen, Wash.
- ◆ Pacemaker—The Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ◆ Paprus—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ◆ Patriot—Capen Belting Rubber Co., St. Louis, Mo.
- ◆ Pawnee—The Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
- ◆ Pennsylvania—The Pennsylvania Rubber Co., Jeanette, Pa.
- ◆ Philkob—James I. Brown, New York.
- ◆ Pilgrim, Signal, Marathon—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Pinnacle—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Power—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ◆ Pyramid—Laurence Belting Co., New York, N. Y.
- ◆ Quaker City—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ R. F. & C.—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Ramapo—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Ranger—Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ Red Strip Bend—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Regent—Dominion Asbestos and Rubber Corp., New York, N. Y.
- ◆ Reliable—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ◆ Reliance—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Republic Rubber Corp., Youngstown, O.
- ◆ Ridgewood—Gutta Percha & Rubber Mfg. Co., New York.
- ◆ Rival, Yale—Empire Tire & Rubber Corp., Trenton, N. J.
- ◆ Rob Roy—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Safety—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Sagamore—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Sallace—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Sawmill Special—Diamond Rubber Co., Inc., The Akron, O.
- ◆ Saxonoid—Thermold Rubber Co., Trenton, N. J.
- ◆ Seal, Trojan—W. H. Salisbury & Co., Chicago, Ill.
- ◆ Selector—Maguire Rubber Co., New York, N. Y.
- ◆ Shield High Grade—The Mechanical Rubber Co., Cleveland, O.
- ◆ Sovereign—Dominion Asbestos and Rubber Corp., New York.
- ◆ Speed King—Dominion Asbestos and Rubber Corp., New York.
- ◆ Sphinx—The Diamond Rubber Co., Inc., Akron, O.
- ◆ S. S. S.—New York Belting & Packing Co., New York, N. Y.
- ◆ Staple—New Jersey Car Spring & Rubber Co., Jersey City, N. J.
- ◆ Straight Stitched—New Jersey Car Spring & Rubber Co., Inc., Jersey City, N. J.
- ◆ Sunset—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Test Special—New York Belting & Packing Co., New Titan—The Diamond Rubber Co., Inc., Akron, O.
- ◆ Titanic—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Tonka—Republic Rubber Co., The, Youngstown, O.
- ◆ Top Notch—Capen Belting Rubber Co., St. Louis, Mo.
- ◆ Tower—Republic Rubber Co., The, Youngstown, O.
- ◆ Ultimate—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ◆ Union—Voorhees Rubber Co., Jersey City, N. J.
- ◆ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Buckeye, Burro, Cleveland, Elephant, Fort Dearborn, Four Ace, Giant, Granite, Great Lakes, Marco-Transmitto.

Matchless Monarch, Axle, Dynamo, Diamond, "P." Parker, Peerless No. 7546, Durham, Fortuna, Huron, Peerless, Shawmut.

- ♦ U. & G.—United & Globe Rubber Mfg. Co., Trenton, N. J.
- Victor—Mulconroy Co., Philadelphia, Pa.
- Viking—W. H. Salisbury & Co., Inc., Chicago, Ill.
- Voorhees Rubber Co., Jersey City, N. J. Trade-names, Corona, Corliss, Bostwick, Red Wing, Utility Stitched.
- ♦ Vulcan—New York Belting & Packing Co., New York, N. Y.
- ♦ Warrented 2XL—The Mechanical Rubber Co., Cleveland, O.
- Weymouth—Wise & Bailey, Philadelphia, Pa.
- Whitehead Bros. Rubber Co., The, Trenton, N. J.
- Woven Steel Hose & Rubber Co., Trenton, N. J.
- ♦ Wicapee—New York Rubber Co., New York, N. Y.

#### BELTING, STEEL, FLEXIBLE.

Hercules—LaPorte Mat & Mfg. Co., LaPorte, Ind.  
Locke Steel Chain Co., Bridgeport, Conn.  
N. Y.

#### BELTING, USED AND RECONSTRUCTED.

Atlantic Mfg. Co., Wilmington, Del.  
Gump, B. F., Chicago, Ill.  
Freadrich Belting Co., St. Louis, Mo.  
Leathercraft Co., The, Cleveland, O.  
Leather Preserving Mfg. Co., Chicago, Ill.  
Lik-Nu—Branch Belting Supply Co., Lockport, N. Y.  
Ranivillized—F. Raniville Co., Grand Rapids, Mich.  
Wayne—Wayne Belting Co., Fort Wayne, Ind.

#### BELTING, "V."

- Dur-Flex—Freadrich Belting Co., St. Louis, Mo.
- Ne-Pac—Capen Belting & Rubber Co., St. Louis, Mo.
- Reinhold Belting Supply Co., Brooklyn, N. Y.
- Sea Lion—Chicago Belting Co., Chicago, Ill.
- ♦ Spartan—The Graton & Knight Mfg. Co., Worcester, Mass.
- Underwood—Wm. Sumner Belting Co., Tolland, Conn.
- Vee-Sol—Hide, Leather & Belting Co., Indianapolis, Ind.

#### BELTS, ENDLESS, LEATHER.

(For Electric Motor Outfits.)

Klinger-Dills Co., The, Dayton, O.

#### BELTS, ENDLESS, THRESHING, ETC.

- Carton—The Carton Belting Co., Boston, Mass.
- ♦ Chrome—Jewell Belting Co., Hartford, Conn.
- Federal—Federal Belting Co., Baltimore, Md.
- Gilmer, L. H., Co., Philadelphia, Pa.
- Griptite—Diamond Rubber Co., Inc., Akron, O.
- Hettrick—Hettrick Mfg. Co., Toledo, O.
- Hemek—Manheim Manufacturing & Belting Co., Chicago, Ill.
- Imperial—Chicago Belting Co., Chicago, Ill.
- Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.
- Smith, Manning J., Belting Co., Philadelphia, Pa.

#### BELTS AND CORD, GUT TRANSMISSION.

American Gut String Mfg. Co., Chicago, Ill.

#### BELTS, AUTO FAN AND MOTOR CYCLE.

- A. B. C.—American Brake Lining Co., Lansdale, Pa.
- Chicago Rawhide Mfg. Co., Chicago, Ill.
- Consolidated Belting Co., Philadelphia, Pa.
- Crowe—Premier Electric Co., Chicago, Ill.
- Endless Woven—J. W. Curry Co., Cincinnati, O.
- ♦ Flexible, Hummer—Detroit Oak Belting Co., Detroit, Mich.
- Flexo-Genesee—Cross Bros. Co., Inc., Rochester, N. Y.
- Gilmer, L. H., Co., Tacony, Philadelphia, Pa. (Cotton.)
- Klinger-Dills Co., Dayton, O.
- Leather Parts Co., Indianapolis, Ind.
- Moloney Belting Co., Chicago, Ill.
- Mooney Belting Co., Cincinnati, O.
- Philadelphia Belting Co., Philadelphia, Pa.
- Reinhold Belting & Supply Co., Brooklyn, N. Y.
- Rusco—Russell Mfg. Co., Middletown, Conn.
- ♦ Sea Lion—Chicago Belting Co., Chicago, Ill.
- Shultz Belting Co., St. Louis, Mo.
- ♦ Spartan—Graton & Knight Mfg. Co., Worcester, Mass.
- Steer—Joseph Meier's Sons, Newark, N. J.
- ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.
- Wayne Belting Co., Detroit, Mich.
- Wetprufe, Vee Flex and Vee Sol—Hide Leather & Belting Co., Indianapolis, Ind.
- ♦ White Strip—Chicago Belting Co., Chicago, Ill.

#### BELTS AND EQUIPMENT, WINDOW WASHERS.

Royal Safety Anchor Co., Chicago, Ill.

#### BELTS, ICE MACHINE AND RAIL GRINDERS.

- ♦ White Strip—Chicago Belting Co., Chicago, Ill.

#### BELTS AND STRAPS, LINEMEN'S.

Leather Parts Co., Indianapolis, Ind.

#### BELTS, TRACTOR, ENDLESS.

Wiltrac—The Carton Belting Co., Boston, Mass.

#### BELTS, WIRE.

Webb—Webb Mfg. Co., Newark, N. J.

#### BENCHES, DRAW.

Bliss Co., E. W., Brooklyn, N. Y.  
Mesta Machine Co., Pittsburgh, Pa.  
Morgan Construction Co., Worcester, Mass.  
Ohl—Geo. A. Ohl & Co., Newark, N. J.  
Perkins Machine Co., Warren, Mass.  
San Francisco Engineering Co., San Francisco, Cal.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Waterbury-Farrell Foundry & Machine Co., Waterbury, Conn.  
Winterhoff Tool & Machine Co., Elkhart, Ind.

#### BENCHES, MOLDERS.

- ♦ Champion—Western Tool & Mfg. Co., Springfield, O.
- V & O—The V & O Press Co., Glendale, L. I., N. Y.
- Watson-Stillman, Aldene, N. J.

#### BENCHES, SAW, PORTABLE.

(See "Machinery, Woodworking," and "Tables, Saw.")

#### BENCHES, PIPE CUTTING AND THREADING.

- Bailey's—Frederick T. Bailey & Co., North Scituate, Mass.
- Champion—Western Tool & Mfg. Co., Springfield, O.
- Columbus—Columbus Machine Works, Columbus, Ind. (Collapsible.)
- Manly—United Engine & Mfg. Co., Hanover, Pa.
- Stand and Pipe Bender—H. P. Martin & Sons, Owensboro, Ky.
- New Britain—New Britain Machine Co., The, New Britain, Conn.
- Sandusky—The Modern Machinery Co., Wilmington, Del.
- Smith's—The Standard Heater & Mfg. Co., Cleveland, Ohio.
- Smith—H. B. Smith Machine Co., Smithville, N. J.
- Standard Iron Works, New York.
- ♦ Toledo—Toledo Pipe Threading Machine Co., Toledo, O. (collapsible.)
- Towsley, John T., Mfg. Co., Cincinnati, O.
- ♦ Vulcan—J. H. Williams & Co., Brooklyn, N. Y.
- ♦ Western Tool & Mfg. Co., Springfield, O.

#### BENCHES, WORK.

- ♦ Champion—Western Tool & Mfg. Co., Springfield, O.
- Continental Auto Parts Co., Columbus, Ind.
- Grand Rapids School Equipment Co., Grand Rapids, Mich.
- Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.
- Manley—Manley Mfg. Co., York, Pa. (portable).
- Manufacturers' Equipment & Engineering Co., The, Framingham, Mass.
- Norfolk—The Norfolk Mfg. Co., Norfolk, Conn.
- ♦ Oliver Machinery Co., Grand Rapids, Mich.
- Pefection—E. H. Sheldon & Co., Muskegon, Mich.
- Prentice—Prentice Co., L. H., Chicago, Ill.
- Ritchie-Wertz Co., The, Dayton, O.
- Tannewitz Works, The, Grand Rapids, Mich.
- Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.
- Van Dorn's Iron Works, Cleveland, O. (steel).

#### BENDERS, ANGLE, HOOK AND EYE.

Hill & Griffith Co., Cincinnati, O.  
Hinman, A. D. & Co., Sandwich, Ill.  
Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
Kidder, J. F., Co., Burlington, Vt.  
Koehring Co., Milwaukee, Wis. (Bar.)  
Niles-Bement-Pond Co., New York, N. Y.  
Novelty Iron Works, Dubuque, Ia.  
Wallace—Wallace Supply Mfg. Co., Chicago, Ill.  
Wickes Bros., Saginaw, Mich.  
Williams, White & Co., Moline, Ill.

#### BENDERS, CONDUIT AND PIPE.

(See also "Springs, pipe bending.")

Austin, M. B. Co., The, Chicago, Ill.  
Baird—Baird Pneumatic Tool Co., Kansas City, Mo.  
Bernz Co., Otto, Newark, N. J.  
Crane Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.  
L. C. M.—L. C. McGuire, Brooklyn, N. Y.  
Little Blacksmith—J. F. Kidder Mfg. Co., Burlington, Vt.  
Lord—Yonts, C. H., Co., The, Meadville, Pa.  
Niles-Bement-Pond Co., New York, N. Y.

**in—Penn Engineering Co., Reading, Pa.**  
**fect—The Cleveland Wire Spring Co., Cleveland, O.**  
**mons Co., John, New York, N. Y.**  
**ndard Engineering Co., Ellwood City, Pa.**  
**rtz & Son, John, Philadelphia, Pa.**  
**derwood & Co., H. B., Philadelphia, Pa. (portable).**  
**aderman Mfg. Co., The, Willimantic, Conn.**  
**llace—Wallace Supply & Mfg. Co., Chicago, Ill.**  
**igley's—The Thos. Wrigley Co., Chicago, Ill.**

**BENDERS, RAIL.**

**ion, Jim Crow—The Aldon Co., Chicago, Ill.**  
**thlehem Fdy. & Mach. Co., So. Bethlehem, Pa.**  
**da Co., The, Chicago, Ill.**  
**rie Gear & Machine Co., Philadelphia, Pa.**  
**mes, Charles F., Engineering Works, Chicago, Ill.**  
**ner, Jim Crow, Samson, Roller—Kalamazoo Rail-**  
**way Supply Co., Kalamazoo, Mich.**  
**ardsoog, Martin, Co., The, Pittsburgh, Pa.**  
**ydraulic Press Mfg. Co., The, Mount Gilead, O.**  
**ron Crow—Kalamazoo Railway Supply Co., Kalam-**  
**zoo, Mich.**  
**alamazoo Railway Supply Co., Kalamazoo, Mich.**  
**iles-Bement-Pond Co., New York, N. Y.**  
**ittsburgh Gage & Supply Co., Pittsburg, Pa.**  
**mith—The Watson-Stillman Co., Aldene, N. J.**  
**erona Tool Works, Pittsburg, Pa.**  
**elnick—Walter A. Zelnicker Supply Co., St. Louis,**  
**Mo.**

**BENDERS, TIRE.**

**American Foundry & Mfg. Co., St. Louis, Mo.**  
**Bethlehem Foundry & Mach. Co., So. Bethlehem, Pa.**  
**oynton & Plummer, Inc., Worcester, Mass.**  
**Buffalo Forge Co., Buffalo, N. Y.**  
**Champion—Champion Blower & Forge Co., Lancaster,**  
**Pa.**  
**Plant—Potts, D. H., Co., Lancaster, Pa.**  
**Green River—Greenfield Tap & Die Corp., Greenfield,**  
**Mass.**  
**Kane & Roach, Syracuse, N. Y.**  
**Southern Skein & Foundry Co., Chattanooga, Tenn.**  
**W. B.—San Francisco Engineering Co., San Francisco.**

**BENDS, CASING.**

**National Tube Co., Pittsburgh, Pa.**

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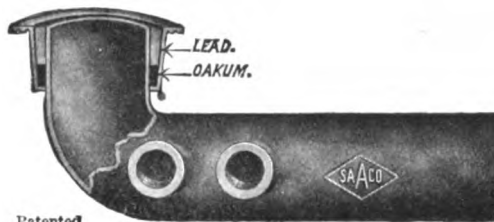
**Albright, Son & Co., Allentown, Pa.**  
**Baker Ice Machine Co., Inc., Omaha, Neb.**  
**Baltimore Tube Co., Baltimore, Md.**  
**Best Co., Pittsburgh, Pa.**  
**Bridgeport Brass Co., Bridgeport, Conn.**  
**Camden Copper Works, Inc., Camden, N. J.**  
**Central Supply Co., Minneapolis, Minn.**  
**Cornell & Underhill, New York, N. Y.**  
**Cox, J. Fillmore, & Co., Bayonne, N. J.**  
**Crane Co., Chicago, Ill.**  
**Crook-Kries & Co., Baltimore, Md.**  
**Dallas Brass & Copper Co., Chicago, Ill.**  
**Ford & Kendig Co., Philadelphia, Pa.**  
**Garrison Brass & Machine Works, New York.**  
**Geiger & Bush, Bucyrus, O.**  
**Glenn Mfg. Co., St. Charles, Ill.**  
**Harris, Arthur, & Co., Chicago, Ill.**  
**Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.**  
**Harvey's, A., Sons, Mfg. Co., Detroit, Mich.**  
**Kaltenhauser, H. J., Philadelphia, Pa.**  
**Kellogg Co., The M. W., New York, N. Y.**  
**Kelly & Jones Co., The, Greensburg, Pa.**  
**Kent—F. C. Kent Company, Irvington, N. J.**  
**Kleinman, Russell F., Philadelphia, Pa.**  
**Lambert & Co., Geo. B., Chicago, Ill.**  
**Little, M. S., Mfg. Co., Hartford, Conn.**  
**Materne Mfg. Co., St. Louis, Mo.**  
**Mitchell, W. K., & Co., Inc., Philadelphia, Pa.**  
**National Pipe Bending Co., New Haven, Conn.**  
**New Jersey Tube Co., New York.**  
**Philadelphia Pipe Bending Co., The, Philadelphia, Pa.**  
**Pittsburgh Piping & Equipment Co., Pittsburgh, Pa.**  
**Pittsburgh Valve Foundry & Construction Co., The,**  
**Pittsburg, Pa.**  
**Rempe Co., Chicago, Ill.**  
**Richardson, Edro, Brass Co., Baltimore, Md.**  
**Riverside Foundry & Galvanizing Co., Kalamazoo,**  
**Mich.**  
**Roessing Manufacturing Co., Pittsburgh, Pa.**  
**Ruud Mfg. Co., Pittsburg, Pa. (copper).**  
**Sales, Murray W., Co., Detroit, Mich.**  
**Shaw-Kendall Engineering Co., Toledo, Ohio.**  
**Simmons Pipe Bending Works, Newark, N. J.**  
**Standard Tool & Mfg. Co., Detroit, Mich.**  
**Standard Water Systems Co., Hampton, N. J.**  
**Superheater Co., The, New York, N. Y.**  
**Taylor, Geo., Brass & Bronze Works Inc., New**  
**York.**  
**Vilster Mfg. Co., The, Milwaukee, Wis.**  
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**Exeter Brass Works, Exeter, N. H.**  
**Kelly & Jones Co., The, Greensburg, Pa.**  
**Little, M. S., Mfg. Co., The, Hartford, Conn.**  
**Lunkenheimer Co., Cincinnati, O.**  
**McNab & Harlin Mfg. Co., New York, N. Y.**  
**Newbury, Jay H. & Son, Goshen, N. Y.**  
**Pittsburgh Valve & Fittings Co., Barberton, Ohio.**  
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**Richardson Brass Co., Edro, Baltimore, Md.**  
**Simmons Co., John, New York, N. Y.**  
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**American Pin Co., Waterbury, Conn.**  
**Blake—Blake Specialty Co., Inc., Rock Island, Ill.**  
**Boosey's—Greenwood Mfg. Co., Detroit, Mich.**  
**Brown's—Brockton Fitting Co., Brockton, Mass.**  
**Cardinal—Clarksville Fdy. & Machine Wks., Clarke-**  
**ville, Tenn.**  
**Chicago Pipe Co., Chicago, Ill.**  
**Cooper Foundry Co., Atchison, Kan.**  
**Dehn's Acme—Compound Injector & Specialty Co.,**  
**Chicago, Ill. (adjustable).**  
**Gulderland Foundry Co., Gulderland, N. Y.**  
**Hammond—Byrd Iron Co., Birmingham, Ala.**  
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Essex Foundry, Newark, N. J.  
Johnson, J. D., Co., Philadelphia, Pa.  
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Windsor Mfg. Co., Milwaukee, Wis.

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◆ Disston & Sons, Henry, Philadelphia, Pa.  
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Massachusetts Tool Co., Greenfield, Mass.  
Southington Hardware Co., Southington, Conn.  
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Starrett Co., The L. S., Athol, Mass.

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Duval—The J. L. Mott Iron Works, Trenton, N. J.  
Equality—Haines, Jones & Cadbury Co., Philadelphia.  
Federal-Huber Co., Chicago, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
McCambridge Co., Philadelphia, Pa.  
Madelita—Maddock's Sons Co., Thomas, Trenton, N. J.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Two-Fired—Trenton Potteries Co., Trenton, N. J.  
Vitreo—Haines, Jones & Cadbury Co., Philadelphia.

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Berloy—Berger Mfg. Co., Canton, O.  
Bernstein Mfg. Co., Philadelphia, Pa.  
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Columbiana Boiler Co., The, Columbiana, Ohio.  
Columbian Steel Tank Co., Kansas City, Mo.  
C. C. Fouts Co., Middletown, O.  
Connery & Co., Inc., Philadelphia, Pa.  
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Willcox Engineering Co., Saginaw, Mich.

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Birkenstein, S., & Sons, Inc., Chicago, Ill.  
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United American Metals Corp., Brooklyn, N. Y.

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Cleveland Wire Spring Co., Cleveland, O.  
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Forest City Bit & Tool Co., Rockford, Ill.  
Goodell-Pratt Co., Greenfield, Mass.  
Greenlee Reliance—Greenlee Bros. & Co., Rockford, Ill.  
Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
◆ Irwin Auger Bit Co., The, Wilmington, O.  
Jackson—Jackson Mfg. Co., Jackson, O.  
Jennings, C. E., & Co., New York, N. Y.  
Lincoln Twist Drill Co., Taunton, Mass.  
Mephisto—W. A. Ives Mfg. Co., The, Wallingford, Conn.  
Millers Falls Co., Millers Falls, Mass.  
Moore Bros., Jamestown, N. Y.  
Morse Twist Drill Co., Taunton, Mass.  
New Process Twist Drill Co., Taunton, Mass.  
Peck, Stow & Wilcox Co., New York, N. Y.  
Red Devil—Smith & Hemenway, Irvington, N. J.  
Russell Jennings—Russell Jennings Mfg. Co., Chester, Conn.  
Sargent & Co., New York, N. Y.  
Simmons Hardware Co., St. Louis, Mo.  
Star Bit & Tool Co., Rockford, Ill.

Snell Mfg. Co., Fiskdale, Mass.  
 Syracuse Twist Drill Co., Syracuse, N. Y.  
 Tower & Lyon Co., New York, N. Y.  
 Union Twist Drill Co., Athol, Mass.  
 ♦ Whitman & Barnes Co., The, Akron, O.  
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 Connecticut Valley Mfg. Co., The, Centerbrook, Ct.  
 Crescent—The Crescent Co., Inc., Meriden, Conn.  
 Forstner Progressive Mfg. Co., Torrington, Conn.  
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 Jennings & Co., C. E., New York, N. Y.  
 Mephisto—Ives, W. A. Mfg. Co., Wallingford, Conn.  
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 Jackson Mfg. Co., Jackson, O.  
 ♦ Prentice—Whitman & Barnes Mfg. Co., Akron, O.  
 Russel Jennings Mfg. Co., Chester, Conn.  
 Salem Tool Co., The, Salem, O.  
 Shimer—Samuel J., Shimer & Sons, Milton, Pa.  
 Snell Mfg. Co., Fiskdale, Mass.  
 Standard Tool Co., Cleveland, O.  
 Star Bit & Tool Co., Rockford, Ill.  
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 Leetonia Tool Co., Leetonia, O.  
 Link-Belt Company, Chicago, Ill.

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 Grand Rapids Hdw. Co., Grand Rapids, Mich.  
 Greenlee Bros. Co., Rockford, Ill.  
 Irwin Auger Bit Co., Wilmington, O.  
 Star Bit & Tool Co., Rockford, Ill.

#### **BITS, REAMER.**

Johnson, Wm., Newark, N. J.

#### **BITS, ROUTER.**

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 Star Bit & Tool Co., Rockford, Ill.

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 Handy—West Haven Mfg. Co., New Haven, Conn.  
 Hargrave—Cincinnati Tool Co., The, Norwood, Cincinnati, O.  
 Jennings, C. E. & Co., New York, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Mephisto—Ives, W. A. Mfg. Co., Wallingford, Conn.

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 National Tool Co., Brooklyn, N. Y.  
 Peck, Stow & Wilcox Co., New York, N. Y.  
 Pioneer—The Southington Mfg. Co., Southington, Conn.

Red Devil—Smith & Hemenway Co., New York.  
 Samson—Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Snell Mfg. Co., Fiskdale, Mass.  
 Standard Tool Co., Cleveland, O.  
 Stanley Rule & Level Co., New Britain, Conn.  
 Syracuse—Syracuse Twist Drill Co., Syracuse, N. Y.  
 S. & I. Company, Springfield, Mass.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.

#### **BITS & SHANKS, SAW.**

Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Southern Saw Works, Atlanta, Ga.

#### **BITS, SCREW AND PLUG.**

Hargrave—The Cincinnati Tool Co., Cincinnati, O.

#### **BITS, TOOL HOLDER.**

(See also "Steel, Tool Holders.")

♦ Armstrong Bros. Tool Co., Chicago, Ill.  
 Down Tool Works, Inc., Fleetwood, Pa.  
 ♦ Williams, J. H., & Co., Brooklyn, N. Y.

#### **BITS, WELL DRILLING.**

Hughes Rotary—Hughes Tool Co., Houston, Tex.

#### **BLADES, CUT OFF.**

Scott-Spencer Automatic Tool Co., The, Cincinnati, O.  
 Ohio Knife Co., The, Cincinnati, O.

#### **BLADES, SHEAR.**

American Saw & Tool Works, Chicago, Ill.  
 Cleveland Knife & Forge Co., Cleveland, O.  
 Detroit Edge Tool Works, Detroit, Mich.  
 Lovejoy, D. & Son, Lowell, Mass.  
 Machinery Company of America, Big Rapids, Mich.  
 Wapakoneta Machine Co., The, Wapakoneta, O.  
 White, L. & I. J. Co., The, Buffalo, N. Y.

#### **BLANKS, GEAR.**

American Vulcanized Fibre Co., Wilmington, Del.  
 Bass Foundry & Machine Co., Fort Wayne, Ind.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chicago Rawhide Mfg. Co., Chicago.  
 Cleveland Machinery & Supply Co., Cleveland, Tenn.  
 Continental Fibre Co., Newark, Del.  
 Erie Forge Co., Erie, Pa.  
 Ganschow & Co., Wm., Chicago, Ill.  
 Holbrook Raw Hide Co., Providence, R. I.  
 Leard, Wm., Co., New Brighton, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Standard Welding Co., Cleveland, O.  
 Taylor Iron & Steel Co., High Bridge, N. J.  
 Tioga Steel & Iron Co., Philadelphia, Pa.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.  
 ♦ Williams, J. H., & Co., Brooklyn, N. Y.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass.

#### **BLANKS, NUT AND SCREW.**

♦ Billings & Spencer Co., The, Hartford, Conn.  
 Keystone Drop Forge Works, Chester, Pa.  
 Steel Products Co., Cleveland, Ohio.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.

#### **BLASTING SUPPLIES AND APPARATUS.**

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.  
 Hercules—Hercules Powder Co., Wilmington, Del.

#### **BLOCKS, BRAKE.**

Garco—General Asbestos & Rubber Co., Chicago, Ill.  
 Multibestos—Multibestos Company, Walpole, Mass.

#### **BLOCKS OR BRICKS, ASBESTOS.**

(See also "Covering Pipe & Boiler.")

Armstrong Cork & Insulating Co., Pittsburgh, Pa.  
 Asbestos Shingle, Slate & Sheathing Co., Ambler, Pa.  
 Asbestos Wood Co., Nashua, N. H.  
 Carey, Philip, Mfg. Co., Lockland, O.  
 ♦ Johns-Manville, Incorporated, New York, N. Y.  
 Keasbey & Mattison Co., Ambler, Pa.  
 Monarch—Franklin Mfg. Co., Franklin, Pa.  
 Norristown Magnesia & Asbestos Co., Norristown, Pa.

#### **BLOCKS, CHAIN.**

(See "Hoists, Chain.")

Box, Alfred & Co., Inc., Philadelphia, Pa.  
 Chisholm-Moore Mfg. Co., Cleveland, O.  
 ♦ Duplex—The Yale & Towne Mfg. Co., Stamford, Conn.



## HARTZ STEEL TACKLE and Snatch Blocks



Strongest Block on the Market

H. D. EDWARDS & CO., Detroit, Mich.

- Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Ford Chain Block & Mfg. Co., Philadelphia, Pa.  
 Franklin, Moore Co., Winsted, Conn.  
 King—A. R. King Mfg. Co., Kingston, N. Y.  
 Obermayer, S. Co., The, Cincinnati, O.  
 Reading—Reading Chain Block Works, Reading, Pa.  
 ♦ Spur-gear—The Yale & Towne Mfg. Co., New York, N. Y.  
 Weston—D. Round & Son, Cleveland, O.  
 Wright—Wright Mfg. Co., Lisbon, O. (High Speed, Screw and differential).

### BLOCKS, DIE, CAST STEEL.

Sizer Forge Co., Buffalo, N. Y.

### BLOCKS, DIE, WOOD.

Stiles, H. A. & Co., Boston, Mass.

### BLOCKS, DRILL.

Starrett, L. S., Co., Athol, Mass.  
 Whitman & Barnes Mfg. Co., Chicago.

### BLOCKS, FRICTION, ASBESTOS.

- Dominion—Dominion Asbestos and Rubber Corp., New York.  
 ♦ J. M.—Johns-Manville Co., The, New York.  
 ♦ Thermoid—Thermoid Rubber Co., Trenton, N. J.

### BLOCKS AND HOOKS, CARGO.

Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 McWilliams, W. H., Sons, New York, N. Y.  
 Samsón—Union Hardware Co., Torrington, Conn.

### BLOCKS, GAUGE, HACK SAW.

- ♦ Armstrong Mfg. Co., The, Bridgeport, Conn.

### BLOCKS, OIL, WELL CASING.

Spang—Spang Co., Butler, Pa.

### BLOCKS, PILEW.

- Barnard & Leas Mfg. Co., Moline, Ill.  
 Barry—Barry Co., Muscatine, Ia.  
 ♦ Barry—R. & J. Dick Co., Inc., Passaic, N. J.  
 ♦ Bass Foundry & Machine Co., Fort Wayne, Ind.  
 ♦ Bond Patent—Bond Foundry & Machine Co., Mannheim, Pa.  
 ♦ Chicago—Chicago Pulley & Shafting Co., Chicago, Ill.  
 Constant, B. S., Mfg. Co., The, Bloomington, Ill.  
 Cresson—Morris Co., Philadelphia, Pa.  
 ♦ Dodge Mfg. Co., Mishawaka, Ind.  
 ♦ Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Golden's—Foundry & Machine Co., Columbus, Ga.  
 Hess-Bright Mfg. Co., Philadelphia, Pa.  
 Howard Iron Works, Buffalo, N. Y.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hunter—James Hunter Machine Co., North Adams, Mass.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 ♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Keystone—Keystone Pulley Co., Oneida, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Minster Machine Co., Minster, O.  
 Monarch—Sprout, Waldron & Co., Muncy, Pa.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 National Foundry Mfg. & Supply Co., Williamsport, Pa.  
 Naylor Bros., Peekskill, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Oneida Steel Pulley Co., Oneida, N. Y.  
 ♦ Pioneer—Standard Pressed Steel Co., Philadelphia, Pa.  
 Prescott Co., The, Menominee, Mich.  
 Rex—Chain Belt Co., Milwaukee, Wis.  
 ♦ Royersford Foundry & Machine Co., Philadelphia, Pa.  
 Schultz, A. L., & Son, Chicago, Ill.  
 S. K. F. Industries, Inc., New York, N. Y.  
 ♦ Standard Pressed Steel Co., Philadelphia, Pa.  
 Transmission Ball Bearing Co., Buffalo, N. Y.  
 ♦ Valley Iron Works, Williamsport, Pa.  
 Webster Mfg. Co., Chicago, Ill.  
 Weller Mfg. Co., Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.  
 ♦ Wolf Co., The, Chambersburg, Pa.  
 ♦ Wood's Sons Co., T. B., Chambersburg, Pa. (plain, wick, ring and chain oiling).  
 ♦ Valley Iron Works, Williamsport, Pa.

### BLOCKS, PLINTH.

Eclipse—L. H. Prentice Co., Chicago, Ill.

### BLOCKS, SEGMENT.

Ferguson—Evans & Howard Fire Brick Co., St. Louis, Mo.  
 La Clede-Christy Clay Products Co., St. Louis, Mo.  
 Macomb Sewer Pipe Works, Macomb, Ill.  
 Monmouth Clay Mfg. Co., Monmouth, Ill.  
 Red Wing Sewer Pipe Co., Red Wing, Minn.  
 Robinson Clay Products Co., Akron, O.  
 San Antonio Sewer Pipe Works, San Antonio, Texas.

### BLOCKS, SIZE.

Loway—A. F. Way Co., Inc., Hartford, Conn.

### BLOCKS, SWAGE.

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Fisher—Fisher & Norris, Trenton, N. J.  
 Giant—D. H. Potts Co., Lancaster, Pa.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Green River—B. B. Noyes Co., Inc., Greenfield, Mass.  
 Indiana Foundry Co., Indiana, Ind.  
 Little Giant—B. B. Noyes Co., Inc., Greenfield, Mass.  
 South Bend Foundry Co., South Bend, Ind.  
 Southern Skein & Foundry Co., Chattanooga, Tenn.

### BLOCKS, TACKLE OR PULLEY.

- American—American Holst & Derrick Co., St. Paul, Minn.  
 Anvil—Western Block Co., Lockport, N. Y.  
 Box, Alfred & Co., Inc., Philadelphia, Pa.  
 Broderick & Bascom Rope Co., St. Louis, Mo.  
 Byers, John F., Machine Co., Ravenna, O.  
 ♦ Chisholm-Moore Mfg. Co., Cleveland, O.  
 Clean-Cut—Reading Wood Pulley Co., Reading, Pa.  
 Cleveland Block Co., Cleveland, O.  
 Dobbie Fdy. & Machine Co., Niagara Falls, N. Y.  
 ♦ Eddy—H. D. Edwards & Co., Detroit, Mich.  
 Ferguson—Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Hall Safety Lock—Hall Mfg. Co., Cedar Rapids, Ia.  
 Harts—H. D. Edwards & Co., Detroit, Mich.  
 ♦ Harts—The H. V. Harts Co., Cleveland, O. (steel).  
 Jackson, S. J., & Son, Bath, Me.  
 Marine Hardware-Equipment Co., S. Portland, Me.  
 McMillan's Sons, W. H., New York, N. Y.  
 Merriman Bros., Boston, Mass.  
 Oval—Cleveland Block Co., Cleveland, O. (metal only).  
 Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.  
 Pull-U-Out Products Co., St. Louis, Mo.  
 Skookum—Columbia Steel Co., Portland, Ore.  
 Star—Boston & Lockport Block Co., Boston, Mass.  
 Star—Hunt-Helm-Ferris & Co., Harvard, Ill.  
 Stiles, H. A., & Co., Boston, Mass.  
 Stowell Company, The, Milwaukee, Wis.  
 Sure Grip—Fulton Iron Works, Detroit, Mich.  
 The H. M. Strong Metal Products Co. (self locking).  
 Cleveland, Ohio.  
 Union—Union Hardware Co., Torrington, Conn.  
 U. W.—The Upson-Walton Co., Cleveland, O.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Vulcan—Harold L. Bond Co., Boston, Mass.  
 ♦ Western Block Co., Lockport, N. Y.

### BLOCKS, THREAD, LEAD GAUGE.

Precision & Thread Grinder Mfg. Co., Philadelphia, Pa.

### BLOCKS AND CLAMPS, "V."

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Holton Co., The, Jackson, Mich.  
 Simplex Tool Co., Woonsocket, R. I.  
 Up-to-Date Tool Co., Boston, Mass.

### BLOWERS, BOILER FLUE & TUBE CLEANING.

(See also "Cleaners, Boiler Flue.")

- A. & D.—Cleveland Flue Cleaner Mfg. Co., Cleveland.  
 Adriaene—Bate Steam Fuel Economy Corp., Brooklyn, N. Y.  
 American—The American Flue Blower Co., St. Louis.  
 Bayer—Bayer Steam Soot Blower Co., St. Louis, Mo.  
 Claflin—C. A. Claflin Co., Boston, Mass.  
 Cleveland—Cleveland Flue Cleaner Mfg. Co., Cleveland.  
 Coe—Nute, McGehee, Geary Co., Chambersburg, Pa.  
 ♦ Correct—Michigan Lubricator Co., Detroit, Mich.  
 Diamond—Diamond Power Specialty Co., Detroit.  
 Dillon—Automatic Flue Blower Co., Kansas City, Mo.  
 Do-Ro—Doermann-Roeher Co., Cincinnati, O.  
 ♦ Favorite—Sherwood Mfg. Co., Buffalo, N. Y.  
 Ferret—Max Machine Co., Clinton, Mass.  
 Griffith, James A., Philadelphia, Pa.  
 Hennebohle Co., Chicago, Ill.  
 Huyette, Paul B., Co., Philadelphia, Pa.  
 Lamy, A. & Son, Elizabeth, N. J.  
 Magic—W. D. Allen Mfg. Co., Chicago, Ill.  
 Marion—Marion Machine Fdy. & Supply Co., Marion, Ind.

Mather—Edmond Mather, Harrisburg, Pa.  
 Max—Max Machine Co., Clinton, Mass.  
 Monarch—The Monarch Steam Blower Co., Troy, N. Y.  
 National Flue Cleaner Co., Groveville, N. J.  
 Pilley—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Reiter—The Reiter Boiler Cleaner Co., Elgin, Ill.  
 R. T. & Co.'s—Richard Thompson & Co., New York.  
 Soot-Sucker—John S. Bushnell & Co., New York, N. Y.  
 Success—Chas. Nuhning & Bro., Cincinnati, O.  
 Tornado—The Paul N. Huyette Co., Philadelphia, Pa.  
 20th Century—Richard Thompson & Co., New York.  
 Two-Way—John S. Bushnell & Co., New York.  
 Vulcan—G. L. Simonds & Co., Chicago, Ill.  
 Whirlwind—General Specialty Co., Buffalo, N. Y.

**BLOWERS, DRAFT, STEAM JET OR TURBINE.**

A. B. C.—American Blower Co., Detroit, Mich.  
 Buffalo—Buffalo Forge Co., Buffalo, N. Y.  
 Coe, C. T., Co., New York, N. Y.  
 Coppus Engineering & Equipment Co., Worcester, Mass.  
 De Laval—De Laval Steam Turbine Co., Trenton, N. J.  
 Exeter Machine Works, Exeter, N. H.  
 Goynes—The Goynes Steam Pump Co., Ashland, Pa.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 McClave—McClave Brooks Co., Scranton, Pa.  
 Moore Steam Turbine Corp., Wellsville, N. Y.  
 Power Turbo Blower Co., New York, N. Y.  
 Sauer Power Generator Co., Pittsburgh, Pa.  
 Star—The Star Drilling Machine Co., Akron, O.  
 Steam Motors Co., The, Springfield, Mass.  
 Sturtevant, B. F., Co., Boston, Mass.  
 Wings—L. J. Wing Mfg. Co., New York, N. Y.

**BLOWERS, FORGE, HAND.**

Buffalo—Buffalo Forge Co., Buffalo, N. Y.  
 Canedy—Otto Mfg. Co., Chicago Heights, Ill.  
 Centennial—D. H. Potts Co., Lancaster, Pa.  
 Champion—Champion Blower & Forge Co., Lancaster, Pa.  
 Cumming—Furness Bros. Co., Chicago, Ill.  
 Foss Mfg. Co., Springfield, O.  
 Hurricane—Potts, D. H., Lancaster, Pa.  
 General Electric Co., The, Schenectady, N. Y.  
 Keystone—Potts, D. H., Lancaster, Pa.  
 Star—Star Forge Co., Buffalo, N. Y.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.

**BLOWERS, FORGE, POWER.**

ABC—American Blower Co., Detroit, Mich.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Clarage Fan Co., Kalamazoo, Mich.  
 Connersville Blower Co., Connersville, Ind.  
 Cyclone—D. H. Potts Co., Lancaster, Pa.  
 Garden City Fan Co., Chicago, Ill.  
 Ilg—Ilg Electric Ventilating Co., Chicago, Ill.  
 Kimble—Kimble Electric Co., Chicago, Ill.  
 Lancaster—Champion Blower & Forge Co., Lancaster, Pa.  
 Lazarus Mfg. Co., Cleveland, O.  
 Marvel—Electric Blower Co., Boston, Mass. (electric).  
 Midway—Champion Blower & Forge Co., Lancaster, Pa.  
 Peerless—New York Blower Co., Chicago, Ill.  
 Royal—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
 Seco—Scranton Electric Construction Co., Scranton, Pa.  
 Sirocco—American Blower Co., Detroit, Mich.  
 Star Mfg. Co., New Lexington, Ohio.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Tiger—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
 XXth Century—Champion Tool Co., Meadville, Pa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Western Chief—Canedy-Otto Mfg. Co., Chicago Heights, Ill.

**BLOWERS, FURNACE AND CUPOLA.**

A. B. C.—American Blower Co., Detroit, Mich.  
 Beach-Russ Co., New York, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Clarage Fan Co., Kalamazoo, Mich.  
 Connersville Blower Co., Connersville, Ind.  
 Funk Machine Co., New York, N. Y.  
 Ingersoll-Rand Co., New York.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Paxson Co., J. W., Philadelphia, Pa.  
 Rockwell—W. S. Rockwell Co., New York.  
 Spencer Turbine Co., Hartford, Conn.  
 Sturtevant Co., B. F., Hyde Park, Mass.  
 Union—Scranton Pump Co., Scranton, Pa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**BLOWERS, GAS, TURBINE DRIVEN.**

Carling Turbine Blower Co., Worcester, Mass.  
 Terry Steam Turbine Co., Hartford, Conn.

**BLOWERS, HEATING, VENTILATING.**

(See also "Fans.")

ABC—American Blower Co., Detroit, Mich.  
 Batterman Truitt Co., Chicago, Ill.

Buffalo Forge Co., Buffalo, N. Y.  
 Clarage Fan Co., Kalamazoo, Mich.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Effco—Hirschman, W. F., Co., Inc., Buffalo, N. Y.  
 Ilg Electric & Ventilating Co., Chicago, Ill.  
 Green Fuel Economizer Co., Matteawan, N. Y.  
 Improved—Improved Appliance Co., Brooklyn, N. Y.  
 Lloyd Service—Lloyd Engineering Co., Montclair, N. J.  
 Mahoney—Mahoney Boiler & Radiator Co., Troy, N. Y.  
 Sirocco—American Blower Co., Detroit, Mich.  
 Sturtevant—B. F. Sturtevant Co., Boston, Mass.

**BLOWERS, ORGAN.**

(See "Motors, Organ Blowing.")

Buffalo Forge Co., Buffalo, N. Y.  
 Improved—Improved Appliance Co., Brooklyn, N. Y.  
 Whitney, F. E. Co., Boston, Mass.

**BLOWERS, PORTABLE ELECTRIC.**

Cyclone—Green Equipment Corp., Chicago, Ill.

**BLOWERS, POSITIVE.**

Beach-Russ Co., New York, N. Y.  
 Clifton—Clifton-Pratt Co., Cincinnati, Ohio.  
 Connersville, Victor—Connersville Blower Co., Connersville, Ind.  
 Garden City—Garden City Fan Co., Chicago, Ill.  
 Hope Fan & Blower Co., Kansas City, Mo.  
 Leiman Bros., New York, N. Y. (Rotary).  
 National Gas Furnace Co., Providence, R. I.  
 Old Reliable—Wilbraham Green Blower Co., Pottstown, Pa. (Rotary).  
 Power, Simplex—Power Turbo Blower Co., New York, N. Y.  
 Sunshine Jasper Co., New York, N. Y.  
 Tropenas Co., Brooklyn, N. Y.

**BLOWERS, PRESSURE.**

Abbe Engineering Co., New York, N. Y.  
 A. B. C.—American Blower Co., Detroit, Mich.  
 American Gas Furnace Co., Elizabeth, N. J.  
 American Warming & Ventilating Co., Elmira, N. Y.  
 Baker Rotary—Baker-Hansen Mfg. Co., Oakland, Calif.  
 Beach-Russ Co., New York, N. Y.  
 Boston Blower Co., Boston, Mass.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Carling—Carling Turbine Blower Co., Worcester, Mass. (Small sizes).  
 Chicago Flexible Shaft Co., Chicago, Ill.  
 Clarage, Kalamazoo—Clarage Fan Co., Kalamazoo, Mich.  
 Clifton—Clifton-Pratt Co., Cincinnati, Ohio.  
 Connecticut Blower Co., Inc., Hartford, Conn.  
 Crowell Mfg. Co., Brooklyn, N. Y.  
 Cyclone & Scientific—Star Mfg. Co., New Lexington, Ohio.  
 Eclipse Fuel Engineering Co., Rockford, Ill.  
 Emil Hald Blower Pipe Works, Brooklyn, N. Y.  
 Green Matteawan—The Green Fuel Economizer Co., Matteawan, N. Y.  
 Gas Appliance Co., Newton, Mass.  
 Hollingsworth, Wm., Baltimore, Md.  
 Moysratt & Case, Kingston, N. Y.  
 Ilg Electric Ventilating Co., Chicago, Ill. (direct connected).  
 Hypress—L. J. Wing Mfg. Co., New York, N. Y.  
 Improved Appliance Co., The, Brooklyn, N. Y.  
 Kerr Turbine Co., Wellsville, N. Y.  
 Lebran—Kruger & Blind Co., Philadelphia, Pa.  
 Lehigh—Hersh Brothers Co., Allentown, Pa.  
 Leiman Bros., New York, N. Y. (Rotary).  
 Mahr Mfg. Co., Minneapolis, Minn.  
 Mathias Brothers & Co., Chicago, Ill.  
 Monarch—Monarch Engineering & Mfg. Co., The, Baltimore, Md.  
 Moore Steam Turbine Corp., Wellsville, N. Y.  
 National Gas Furnace Co., Providence, R. I.  
 New England Ventilating & Heating Co., Providence, R. I.  
 New York Blower Co., The, Chicago, Ill.  
 Nute, McGehee, Geary Co., Inc., Chambersburg, Pa.  
 Old Reliable (rotary)—Wilbraham-Green Blower Co., Pottstown, Pa. (for smelter foundry).  
 Potts, D. H., Co., Lancaster, Pa.  
 Power, Simplex—Power Turbo Blower Co., New York, N. Y.  
 Rockwell Co., W. S., New York, N. Y.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Sterling Blower Co., Hartford, Conn.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Syracuse Industrial Gas Co., Syracuse, N. Y.  
 Terry Steam Turbine Co., Hartford, Conn.  
 Vano—Coppus Engineering & Equipment Co., Worcester, Mass.  
 Virginia Blower & Heater Co., Inc., Richmond, Va.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.  
 Wilbraham-Green Blower Co., Pottstown, Pa.  
 Worthington Pump & Mach'y Corp., New York, N. Y.



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Steam Motor Co., Springfield, Mass.  
Vano—Coppus Engineering & Equipment Co., Worcester, Mass.

**BLOWERS, VOLUME.**

A. B. C.—American Blower Co., Detroit, Mich.  
Buffalo Forge Co., Buffalo, N. Y.  
Clarge Fan Co., Kalamazoo, Mich.  
Gen'l. Compressed Air & Vacuum Machinery, St. Louis, Mo.  
Improved Appliance Co., Brooklyn, N. Y.  
Indiana—Indiana Fan Co., Indianapolis, Ind.  
Sterling—Sterling Blower Co., Hartford, Conn.  
Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
Unblade—Autovent Fan & Blower Co., Chicago, Ill.  
Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**BLOW PIPES.**

American Gas Furnace Co., New York, N. Y.  
Bernz, Otto, Newark, N. J.  
Boekel & Co., Wm., Philadelphia, Pa.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Grand Rapids Blow Pipe Co., Grand Rapids, Mich.  
Johnson, Wm., Newark, N. J.  
Newark Brass Wks., Newark, N. J.  
Noiseless—New England Ventilating & Heating Co., Providence, R. I.  
Rockwell, W. S. Co., New York, N. Y.  
Sayre, L. A. & Son, Newark, N. J.  
Sun Vapor & Gas Light Co., Canton, Ohio.  
Taylor, George, New York, N. Y.  
Turner Brass Works, The, Sycamore, Ill.

**BOARDS, BINDERS.**

Agate, F. S. F., Jerda, Roco.  
Davey & Sons, W. O., Jersey City, N. J.  
Hewitt & Bros., C. B., Inc., New York, N. Y.  
Ingalls & Company, Castleton, N. Y.  
Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.

**BOARDS, BULLETIN.**

Economy—Economy Drawing Table & Mfg. Co., Adrian, Mich.  
Matthews & Co., Jas. H., Pittsburgh, Pa.

**BOARDS, FIBRE.**

Davey, W. O. & Sons, Jersey City, N. J.  
Fibrofelt, Water-proof Lith—Union Fibre Co., Inc., Winona, Minn.

**BOARDS, FRICTION**

Agate, F. S. F., Kory—C. B. Hewitt & Bros., Inc., New York, N. Y.  
Davey, E. H. Co., Bloomfield, N. J.  
Davey & Sons, W. O., Jersey City, N. J.  
Hewitt, C. B., & Bro., Inc., New York, N. Y.  
Ingalls & Co., Castleton, N. Y.  
Rofco—Rogers Fibre Co., Boston, Mass. (soft fibre).  
Spaulding & Sons Co., J., North Rochester, N. H.  
Stratford Oakum Co., Geo., Jersey City, N. J.  
West Virginia Pulp & Paper Co., New York.

**BOARDS AND FRAMES, GAGE.**

Industrial Instrument Co., The, Foxboro, Mass.  
Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
Schaefter & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
United States Gauge Co., New York, N. Y.

**BOARDS, GASKET**

W. O. Davey & Sons, Jersey City, N. J.

**BOARDS, GUIDE, IRON.**

Lebiron—Lebanon Machine Co., Lebanon, N. H.

**BOARDS, TRUNK.**

Davey, W. O. & Sons, Jersey City, N. J.  
Hewitt & Bros., C. B., New York, N. Y.  
Ingalls & Company, Castleton, N. Y.  
Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.

**BOILER, METAL TREATMENT.**

(See also, Compounds, Boilers).

Atkinson's—Economy Lubricating Co., Boston, Mass.  
Hays, Jos. W., Corp., Michigan City, Ind.  
Ideal—Ideal Chemical Co., Indianapolis, Ind.

**BOILERS, BARBERS', HOT WATER.**

Badger & Sons Co., E. B., Boston, Mass.  
Dudley—Gilbert J. Moriarty, Boston, Mass.  
Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
Gerstein Bros. & Cooper, South Boston, Mass.  
Koven & Bro., L. O., Jersey City, N. J.  
Pennsylvania Range Boiler Co., Philadelphia, Pa.  
Riverside—Riverside Boiler Works, Inc., Cambridge, Mass.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Scaife & Sons Co., Wm. E., Pittsburg, Pa.

**BOILERS, BLEACHING, PAPER MILL.**

Biggs—Biggs Boiler Works Co., The, East Akron, O.

**BOILERS, COPPER, LARGE SIZE.**

Badger & Sons Co., E. B., Boston, Mass.  
Dahlquist Mfg. Co., The, South Boston, Mass.  
Gerstein Bros. & Cooper, South Boston, Mass.  
Moriarty, Gilbert J., Boston, Mass.

**BOILERS, DOWN DRAFT.**

Bright Ideal—Gurney Heater Mfg. Co., Boston, Mass.  
Bros—Wm. Bros. Boiler & Mfg. Co., Minneapolis, Minn.  
Capital—U. S. Radiator Corp., Detroit, Mich.  
Cripps—Prudential Heater Co., Louisville, Ky.  
Hawley Down Draft Furnace Co., Easton, Pa.  
Herbert—Herbert Boiler Co., The, Chicago, Ill.  
Ideal—American Radiator Co., Chicago.  
Molby—E. C. Molby, New York, N. Y.  
Monarch—Wm. H. Page Boiler Co., New York, N. Y.  
New Star—Harrisburg Mfg. & Boiler Co., Harrisburg, Pa.  
O'Brien, John, Boiler Works, St. Louis, Mo.  
Peerless—Peerless Heater Co., Pittsburgh, Pa.  
Pierce—Pierce, Butler & Pierce Mfg. Co., New York, N. Y.  
Pierce-Kellogg-Mackey Co., Chicago, Ill.  
Prudential Heating Co., Akron, O.  
Smith—H. B. Smith Co., Westfield, Mass.  
Surrell Down Draft Boiler Co., New York, N. Y.

**BOILERS, HEATING, GAS BURNING.**

Bacon Heater & Mfg. Co., Cleveland, O.  
Diamond Gas Boiler—Diamond Machine Co., Cincinnati, Ohio.  
Peerless—Peerless Heater Co., Pittsburgh, Pa.  
Stephens Mfg. Co., Los Angeles, Cal.  
Vesuvius—The Vesuvius Engineering Co., Inc., New York.  
Wise—Heating Supply Co., Pittsburgh, Pa.  
Wise Furnace Co., The, Akron, O.

**BOILERS, HEATING, MAGAZINE FEED.**

Herbert—The Herbert Boiler Co., Chicago, Ill.  
I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.  
Illinois—Illinois Malleable Iron Co., Chicago, Ill.  
Imperial—Utica Heater Co., Utica, N. Y.  
Keystone Boiler & Foundry Co., Landisville, Pa.  
Molby Boiler Co., Inc., New York, N. Y.  
Newport—Newport Boiler Co., Chicago, Ill.  
Pierce Down Draft—Pierce, Butler & Pierce Mfg. Corp., New York, N. Y.  
Standard Heater Co., The, Williamsport, Pa.  
Thompson—Thompson Heater Corp., Buffalo, N. Y.

**BOILERS, HEATING, STEAM AND HOT WATER.**

Acme—Wm. Bartley & Sons, Bartley, N. J.  
Acme Fire Box—American Radiator Co., Chicago, Ill.  
All Right—Wm. H. Paige Boiler Co., New York, N. Y.  
Andrews—Andrews Heating Co., Minneapolis, Minn.  
Arco—American Radiator Co., Chicago, Ill.  
Arcola—American Radiator Co., Chicago, Ill.  
Bacon Heater & Mfg. Co., Cleveland, O.  
Bates—Edward P. Bates, Syracuse, N. Y.  
Best—Ferguson & Lange Foundry Co., Chicago, Ill.  
Boynton—Boynton Furnace Co., New York, N. Y.  
Browell Co., The, Dayton, Ohio.  
Burnham Boiler Corporation, Irvington, N. Y.

Burnham—Lord & Burnham Co., Irvington, N. Y.  
 Cafe—A. E. Olmstead, Pulaski, N. Y.  
 Calorific—The Messenger Mfg. Co., Tatamy, Pa.  
 Capitol—United States Radiator Corp., Detroit, Mich.  
 Capitol Winchester—U. S. Radiator Corp., Detroit, Mich.  
 Carton—International Heater Co., Utica, N. Y.  
 Catchpole—Geneva Foundry Corp., Geneva, N. Y.  
 Chandler—Chandler Heater Co., Cedar Rapids, Iowa.  
 C. H.—Casey-Hedges Co., Chattanooga, Tenn.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Columbia Heater Co., Paterson, N. J.  
 Concord Mfg. Co., Dayton, Ohio.  
 Cottage—The H. B. Smith Co., Westfield, Mass.  
 Craig—Standard Heater Co., Williamsport, Pa.  
 Crawford and—Crawford-Cadet—Walker & Pratt Mfg. Co., Boston.  
 Crown—March-Brownback Stove Co., Pottstown, Pa.  
 Davidson Bungalow—McClellan-Davidson, Hanover, Pa.  
 Duplex Convertible Heaters—Hydro Heater Co., Pittsburgh, Pa.  
 Duplex-Superior—Duplex Mfg. Co., Superior, Wis.  
 Economic—Godfrey-Keeler Co., New York, N. Y.  
 Economy—Economy Boiler Co., Willmar, Minn.  
 Empress—International Heater Co., Utica, N. Y.  
 Excel—Johnson-Washburn Co., Boston, Mass.  
 Exeter Machine Works, Exeter, N. H.  
 Faultless—The Graft Furnace Co., New York, N. Y.  
 Favorite—R. C. Bartley Co., Bartley, N. J.  
 Floral City—Monroe Foundry & Furnace Co., Monroe, Mich.  
 Freed—Freed Heater Co., Collegeville, Pa.  
 Freeman Mfg. Co., Racine, Wis.  
 Frost Mfg. Co., Galesburg, Ill.  
 Galva—The Galva Heater Co., Galva, Ill.  
 Gem—Abendroth Bros., Port Chester, N. Y.  
 Gem Torrid—Torrid Heater Co., Hackettstown, N. J.  
 Geneva—Vance Boiler Works, Geneva, N. Y.  
 Gibraltar Square—W. A. Birdsall & Co., Newark, N. J.  
 Gilt Edge—Schwab & Sons Co., R. J., Milwaukee, Wis.  
 Godfrey, Keeler Co., New York, N. Y.  
 Gold—The H. B. Smith Co., Westfield, Mass.  
 Gorton Self Feeding—Gorton & Lidgerwood Co., New York, N. Y.  
 Gunther's—Peters Pump Co., Kewanee, Ill.  
 Gurney Heater Mfg. Co., Boston, Mass.  
 Hawkeye Oval—Iowa Mfg. Co., Oskaloosa, Ia.  
 H-B—H. B. Smith Co., Westfield, Mass.  
 Henderson Orbis, Radiant, Thermo—Reading Heater & Supply Co., Reading, Pa.  
 Herbert—The Herbert Boiler Co., Chicago, Ill.  
 Holland—American Radiator Co., Chicago, Ill.  
 Hornet—Wm. H. Page Boiler Co., New York, N. Y.  
 Hudson—Hudson Boiler Mfg. Co., New York, N. Y.  
 Hy Duty Economic—Frank Prox Co., Terre Haute, Ind.  
 Ideal Furnace Co., Detroit, Mich.  
 Ideal Arcola, Coke Sectional—American Radiator Co., Chicago, Ill.  
 Imico—Illinois Malleable Iron Co., Chicago, Ill.  
 Imico-Diamond—Illinois Malleable Iron Co., Chicago.  
 Imperial Sunshine—Reading Scale & Machine Co., Reading, Pa.  
 International, Empress, Prince, Water Gate—International Heater Co., Utica, N. Y.  
 Iowa—Chandler Heater Co., Cedar Rapids, Iowa.  
 Iowa—Seever's Mfg. Co., Oskaloosa, Ia.  
 Keeler—E. Keeler Co., Williamsport, Pa.  
 Kewanee Firebox—Kewanee Boiler Co., Kewanee, Ill.  
 Keystone Spiral Tube—Keystone Boiler & Foundry Co., Landisville, Pa.  
 Kroeschell—Kroeschell Bros. Co., Chicago, Ill.  
 Leader—Thacher Furnace Co., New York, N. Y.  
 Lenox—Gurney Heater Mfg. Co., Boston, Mass.  
 Lincoln—A. L. Folsom, Boston, Mass.  
 Mahony—Mahony, A. D., Troy, N. Y.  
 Majestic Sunshine—The Reading Scale & Machine Co., Reading, Pa.  
 Manhattan—Mackay Mfg. Co., Newark, N. J.  
 Menlo, Mercer, Mills—The H. B. Smith Co., Westfield, Mass.  
 M. F.—Macbeth Boiler Co., Cleveland, O.  
 Mills—H. B. Smith Co., Westfield, Conn.  
 Model—Richmond Radiator Co., New York, N. Y.  
 Molby—Molby Boiler Co., Inc., New York, N. Y.  
 Monarch—The Wm. H. Page Boiler Co., New York, N. Y.  
 Monarch Sunshine—The Reading Stove Works, Reading, Pa.  
 Monitor, Steel Coil—Monitor Bl. Loop Radiator Co., Lancaster, Pa.  
 Mueller—L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
 M. & F.—Macbeth-Fassett Co., Cleveland, Ohio.  
 Nagle—Nagle Engine & Boiler Works, Erie, Pa.  
 National Upright—National Radiator Co., Johnstown, Pa.  
 New Era—Phelps Bros. Co., New York, N. Y.  
 New Life—McDonnell Boiler & Iron Works, Des Moines, Ia.  
 Nico—Federal Radiator Co., New Castle, Pa.  
 Niles Steel Tank Co., Niles, Mich.  
 Novelty—Abram Cox Stove Co., Philadelphia, Pa.

Novelty—Thomas, Roberts, Stevenson Co., Philadelphia, Pa.  
 Novus—National Radiator Co., Johnstown, Pa.  
 Onondaga—Syracuse Heater Co., Syracuse, N. Y.  
 Our Favorite—The R. C. Bartley Co., Bartley, N. J.  
 Our Own—National Radiator Co., Johnstown, Pa.  
 Pacific—General Boilers Co., Waukegan, Ill.  
 Page—The Wm. H. Page Boiler Co., New York, N. Y.  
 Palace Queen—International Heater Co., Utica, N. Y.  
 Paragon Prize—Isaac A. Sheppard Co., Philadelphia.  
 Peerless—Peerless Heater Co., Pittsburgh, Pa.  
 Phelps Smokeless—Ideal Mfg. & Supply Co., Oskaloosa, Ia.  
 Pierce, Butler & Pierce Mfg. Co., New York. Trade names—American, Pebco, Spence.  
 Presto—The Pressed Radiator Co. of America, Pittsburgh, Pa.  
 Price—International Heater Co., Utica, N. Y.  
 Progress—Thatcher Furnace Co., New York, N. Y.  
 Prox, Frank Co., Terre Haute, Ind. Trade names—Duplex Economic, Economic, Extra Heavy Duty, Up-Draft Smokeless, Radium.  
 Putnam—The Putnam Foundry & Machine Co., Putnam, Conn.  
 Richmond—Richmond Radiator Co., New York, N. Y.  
 Rival—Federal Radiator Co., New Castle, Pa.  
 Roman—Federal Radiator Co., New Castle, Pa.  
 Royal—Hart & Crouse Co., Utica, N. Y.  
 Roys—Ideal Heating Co., Brooklyn, N. Y.  
 Safe—A. E. Olmstead & Sons, Pulaski, N. Y.  
 Sanborn—Sanborn Furnace Co., Methuen, Mass.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Scalf, Wm. B. Sons Co., Pittsburgh, Pa.  
 Scollay—John A. Scollay, Brooklyn, N. Y.  
 Seever's—Seever's Mfg. Co., Oskaloosa, Ia.  
 Simons—H. C. Simons Sons, N. Bennington, Vt.  
 Simplex Gas Heater—Hydro Heater Co., Pittsburgh, Pa.  
 Smith Service—H. B. Smith Co., Westfield, Mass.  
 Spencer Magazine Feed—Standard Heater Co., Williamsport, Pa.  
 Spiral—Spiral Boiler & Radiator Co., St. Paul, Minn.  
 Square Pat—The Boynton Furnace Co., New York, N. Y.  
 Standard—Giblin & Co., Utica, N. Y.  
 Stephens Mfg. Co., Los Angeles, Cal.  
 Sterling—Thatcher Furnace Co., New York, N. Y.  
 Sterling—Walker Mfg. & Sup. Co., Detroit, Mich.  
 Stewart—Geo. B. Stewart, Pittsburgh, Pa.  
 Storm King—Roberts-Hamilton Co., Minneapolis, Minn.  
 Sultan—International Heater Co., Utica, N. Y.  
 Superior Standard—Superior Machine & Boiler Works, Chicago, Ill.  
 Super-Smokeless—Utica Heater Co., Utica, N. Y.  
 Thatcher—Thatcher Furnace Co., New York, N. Y.  
 Tico—The Titusville Iron Works Co., Titusville, Pa.  
 Torrid—Alonso Hoover & Son, Hackettstown, N. J.  
 Triumph—Craig-Reynolds Foundry Co., Dayton, Ohio.  
 XXth Century—XXth Century Heating & Ventilating Co., The, Akron, O.  
 Union—Union Radiator Co., Johnstown, Pa.  
 Unique—New Milford Foundry & Machine Co., New Milford, Conn.  
 Vance Boiler—Vance Boiler Works, Geneva, N. Y.  
 Vestal Sunshine—The Reading Scale & Machine Co., Reading, Pa.  
 Victor—Burley Heater Co., Tyrone, Pa.  
 Volunteer—Wm. H. Page Boiler Co., New York, N. Y.  
 Waco, Round—W. A. Birdsall & Co., Newark, N. J.  
 Walker—Walker & Pratt Mfg. Co., Boston, Mass.  
 Walsh Boiler & Iron Works, Springfield, Mass.  
 Well-McLain—Well-McLain Co., Michigan City, Ind.  
 Weldco—Cave Welding & Mfg. Co., Springfield, Mass.  
 Whitacre Boiler Co., Wellsville, O.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.  
 Yale—J. H. McLain Co., Canton, O.  
 Zenith—F. O. Singer Co., Baltimore, Md.

#### BOILERS, HORIZONTAL, SCOTCH.

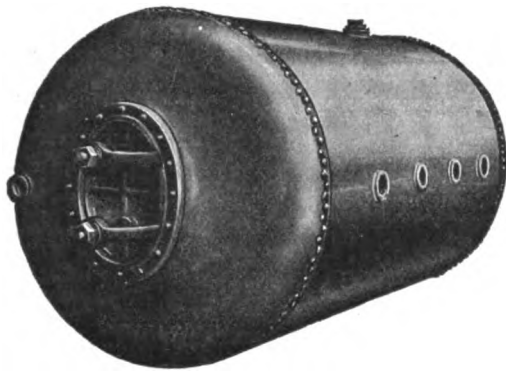
Brennan, John & Co., Inc., Detroit, Mich.  
 Coatesville Boiler Works, Coatesville, Pa.  
 Crook, H. E., Co., Inc., Baltimore, Md.  
 Dillon, D. M., Steam Boiler Works, Fitchburg, Mass.  
 Freeman Mfg. Co., The, Racine, Wis.  
 Lefel, James, & Co., The, Springfield, O.  
 MacKinnon Boiler & Machine Co., Bay City, Mich.  
 Maning—Bigelow Co., The, New Haven, Conn.  
 Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
 Oil City Boiler Works, Oil City, Pa.  
 Portland Co., The, Portland, Me.  
 Schofield, J. S., Sons Co., Macon, Ga.  
 Smith, Samuel, & Son Co., Paterson, N. J.  
 Toledo Ship Building Co., Toledo, O.  
 Wickes Boiler Co., The, Saginaw, Mich.  
 Wilson Steam Boiler Co., Omaha, Neb.

#### BOILERS, HOT WATER SUPPLY.

(See Heaters, Hot water Supply.)

#### BOILERS, INTERNALLY FIRED.

Brennan, John, & Co., Detroit, Mich.  
 C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
 Dutton, C. H., Co., The, Kalamazoo, Mich.



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Freeman Mfg. Co., The, Racine, Wis.  
Frost Mfg. Co., Galesburg, Ill.  
International Boiler Works Co., East Stroudsburg, Pa.  
International Engineering Works, Inc., Framingham, Mass.  
Keeler Co., E., Williamsport, Pa.  
◆ Leffel—James Leffel & Co., Springfield, O.  
Murray—Murray Iron Works Co., Burlington, Ia.  
Pennsylvania Boiler Works, Erie, Pa.  
Toledo Ship Building Co., Toledo, O.  
Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.

### BOILERS, LAUNDRY, VENTILATING.

Hugo Manufacturing Co., West Duluth, Minn.

### BOILERS, LOCOMOTIVE, FIRE BOX.

Acme—American Radiator Co., Chicago, Ill.  
Andrews—Andrews Heating Co., Minneapolis, Minn.  
Balsley, John, Iron Works, Philadelphia, Pa.  
Beggs & Co., James, New York, N. Y.  
Brennan & Co., John, Detroit, Mich.  
Brownell Co., Dayton, O.  
C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
Columbiana Boiler Co., Columbiana, O.  
Clyde Iron Works, Duluth, Minn.  
Detroit—Federal Radiator Co., New Castle, Pa.  
Eclipse—Frick Co., Waynesboro, Pa.  
Frost Mfg. Co., Galesburg, Ill.  
Godfrey-Keeler Co., New York, N. Y.  
International Boiler Works Co., East Stroudsburg, Pa.  
Keeler Co., E., Williamsport, Pa.  
Keeley Boiler Works, J., Jackson, Mich.  
Kewanee—Kewanee Boiler Co., Kewanee, Ill.  
◆ Leffel—The James Leffel & Co., Springfield, O.  
McKinnon Boiler & Mach. Co., Bay City, Mich.  
Manistee Iron Works Co., Manistee, Mich.  
Marine Boiler Works Co., Toledo, O.  
Murray Iron Works Co., Burlington, Iowa.  
Nagle—Nagle Engine & Boiler Works, Erie, Pa.  
Oil City Boiler Works, Oil City, Pa.  
Oil Well Supply Co., Pittsburg, Pa.  
Petroleum Iron Works Co., Sharon, Pa.  
Smith & Son Co., Samuel, Paterson, N. J.  
Titusville Iron Co., Titusville, Pa.  
Weintz Bros., Evansville, Ind.

### BOILERS, MARINE.

Allen Sons Co., Wm., Worcester, Mass.  
Badenhausen Co., Philadelphia, Pa.  
Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
Bigelow Co., The, New Haven, Conn.  
Brennan & Co., John, Detroit, Mich. (Scotch.)  
C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
Central Boiler & Supply Co., Grand Rapids, Mich.  
Codd Co., E. J., Baltimore, Md.  
Columbiana Boiler Co., The, Columbiana, Ohio.  
Dillion, D. M., Steam Boiler Works, Fitchburg, Mass.  
Fitzgibbon—Fitzgibbon Boiler Co., Oswego, N. Y.  
Freeman Mfg. Co., The, Racine, Wis.  
Frost Mfg. Co., The, Galesburg, Ill.  
Heine—Heine Boiler Co., St. Louis, Mo.  
International Boiler Works Co., East Stroudsburg, Pa.  
International Engineering Works, Inc., Framingham, Mass.  
Kingsford Foundry & Machine Works, Oswego, N. Y.  
Kittoe Boiler & Tank Co., Canton, O.  
Leffel—James Leffel & Co., Springfield, O.  
McIlvain & Spiegel Boiler & Tank Co., Cincinnati, O.  
Mohr, John, & Sons, Chicago, Ill.  
Murray—Murray Iron Works Co., Burlington, Ia.  
Oil City Boiler Works, Oil City, Pa.  
Pennsylvania Boiler Works, Erie, Pa.  
Portland Co., The, Portland, Me.  
Puget Sound Machinery Depot, Seattle, Wash.  
Racine Boat Mfg. Co., Muskegon, Mich.

Seabury—Gas Engine & Power Co., New York, N. Y.  
Smith, Samuel & Son Co., Paterson, N. J.  
Springfield Boiler Co., Springfield, Ill.  
Sun Shipbuilding Co., Wetherill Plant, Chester, Pa. (Scotch.)  
Valk & Murdock Iron Works, Charleston, S. C.  
Vance Boiler Works, Geneva, N. Y.  
Wickes Boiler Co., The, Saginaw, Mich.  
Worth Bros., Coatesville, Pa.

### BOILERS, OIL COUNTRY TYPE.

Brennan, John & Co., Inc., Detroit, Mich.  
Ward—The Chas. Ward Engineering Works, Charleston, W. Va.

### BOILERS, PORTABLE, STEAM, FOR TRAWING.

Beekman, Helland's—Garrison Brass & Machine Works, New York.

### BOILERS AND PANS, MAPLE SUGAR.

Miller Machine Works, Springs, Pa.

### BOILERS, RANGE, COPPER.

American—John Trageser Steam & Copper Works, New York, N. Y.  
Badger, E. B., & Sons Co., Boston, Mass.  
Blessing, C. A., Philadelphia, Pa.  
Brown & Bros.—The Randolph-Clowes Co., Waterbury, Conn.  
Continental—John Trageser Steam Copper Works, New York, N. Y.  
Dahlquist Mfg. Co., South Boston, Mass.  
Dudley—Gilbert J. Moriarty, Boston, Mass.  
◆ Eagle—Gerstein Bros. & Cooper, South Boston, Mass.  
Hicks & Son, S. D., Boston, Mass.  
Manchester Co., The, James B., Providence, R. I.  
Modern—Hayes Mfg. Co., Paterson, N. J.  
Mott, J. L., Iron Works, Trenton, N. J.  
Wilhelm—Hayes Mfg. Co., Paterson, N. J.

### BOILERS, RANGE, AND HEATER COMBINED.

Duluth—Duluth Water Heater Co., Duluth, Minn.  
Economy—Economy Heater Co., Chicago, Ill.  
Gem, Chicago, Royal, Unique—Bastian-Morley Co., Chicago, Ill.  
Gullick—The Debold Co., Inc., Big Run, Pa.  
Inferno Gas Boiler Co., Chicago, Ill.  
Peerless—Peerless Boiler Co. (Not Inc.), Chicago, Ill.  
Richmond Sanitary Mfg. Co., San Francisco, Cal.  
Superior, Marvel, Royal, Automatic—The Bastian-Morley Co., La Porte, Ind.  
Trageser, John, Steam Copper Works, New York.

### BOILER SCALERS (PNEUMATIC).

Dallett—Thos. H. Dallett Co., Philadelphia, Pa.

### BOILERS, RANGE, GALVANIZED.

Ajax, Eureka—Walls, Owen & Stambach Co., Philadelphia, Pa.  
American—Trageser Steam Copper Works, New York.  
Atlantic—Fleck Bros. Co., Philadelphia, Pa.  
Carroll—P. Carroll & Sons, Philadelphia, Pa.  
Case, W. A., & Son Mfg. Co., Buffalo, N. Y.  
Champion—The Thompson Iron Works, Philadelphia.  
Continental—John Trageser Steam Copper Works, New York, N. Y.  
Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
Graves—John Trageser Steam Copper Works, New York, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Hibbs, E. A., Philadelphia, Pa.  
Johnson, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Keeley Boiler Works, J., Jackson, Mich.

Kineo—Walls, Owen & Stambach Co., Philadelphia.  
 Koven—L. O. Koven & Bro., Jersey City, N. J.  
 Leader—Haines, Jones & Cadbury Co., Philadelphia.  
 Monitor—Walls, Owen & Stambach Co., Philadelphia.  
 Never-Leak—Fleck Bros. Co., Philadelphia, Pa.  
 Pawnee—Fleck Bros. Co., Philadelphia, Pa.  
 Philadelphia—Pennsylvania Range Boiler Co., Philadelphia, Pa. (welded and riveted).  
 Pointer—Haines, Jones & Cadbury Co., Philadelphia.  
 Riverside. Kopsteel—Riverside Boiler Works, Inc., Cambridge, Mass.  
 Ronalds—J. D. Johnson Co., Philadelphia, Pa.  
 Sanitary—P. Carroll & Son, Philadelphia, Pa.  
 Scalf, Wm. B., & Sons Co., Pittsburg, Pa.  
 Star—Detroit Range Boiler Co., Detroit, Mich.  
 Trageser's—Trageser Steam Copper Works, New York, N. Y.  
 Whitaker-Glessner Co., Portsmouth, Ohio.  
 Wolff Mfg. Co., Chicago, Ill.

**BOILERS, STEAM, FLASH.**

Strong, Wm. J. H., Chicago, Ill.

**BOILERS, STEAM SHOVEL AND HOISTING ENGINE.**

International Boiler Works Co., East Stroudsburg, Pa.

**BOILERS, TUBULAR.**

Adams, W. T., Machine Co., Corinth, Miss.  
 Akerlund & Semmes, Inc., New York, N. Y.  
 Allen Sons Co., Wm., Worcester, Mass.  
 ♦ Ames Iron Works, Oswego, N. Y.  
 Balzley Iron Works, The John, Philadelphia, Pa.  
 Bass Foundry & Machine Co., The, Ft. Wayne, Ind.  
 Bates, W. T., & Son, Conshohocken, Pa.  
 Bay City Iron Company, Bay City, Mich.  
 Beach & Son, H. B., Hartford, Conn.  
 Borger Bros., Columbus, O.  
 Bovaird & Seyfang Mfg. Co., Bradford, Pa.  
 Brennan, John, & Co., Detroit, Mich.  
 Brownell Co., The, Dayton, O.  
 Cambridge Iron Works, Cambridge, Mass.  
 C. E. & B. Co.—Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Central Boiler, Tank & Plate Iron Works, Millvale, Pa.  
 Central Boiler Works, Grand Rapids, Mich.  
 Champion—Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Chandler & Taylor Co., Indianapolis, Ind.  
 C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
 Codd Co., E. J., Baltimore, Md.  
 Columbiana Boiler Co., Columbiana, O.  
 Columbus Steam Boiler & Heater Co., Columbus, Ohio.  
 Connelly, D., Boiler Co., The, Cleveland, Ohio.  
 Corinth Machinery Co., Corinth, Miss.  
 De Loach Mill Mfg. Co., Bridgeport, Ala.  
 Diamond Gas Boiler—Diamond Machine Co., Cincinnati, Ohio.  
 Dillon, D. M., Steam Boiler Works, Fitchburg, Mass.  
 Directurn—James Beggs & Co., New York, N. Y.  
 Drake-Williams-Mount Co., Omaha, Neb.  
 Economic—The English Iron Works Co., Kansas City.  
 Economic—Erie City Iron Works, Erie, Pa.  
 Economical—Dutton, C. H., Co., The, Kalamazoo, Mich.  
 Erie City Iron Works, Erie, Pa.  
 Farrar & Trefts, Inc., Buffalo, N. Y.  
 Freeman Mfg. Co., Racine, Wis.  
 Frost Mfg. Co., Galesburg, Ill.  
 Gam City Boiler Works, Dayton, O.  
 Godfrey-Keeler Co., New York, N. Y.  
 Grupe Drier & Boiler Co., Davenport, Iowa.  
 Hartley Boiler Works, Montgomery, Ala.  
 Herbert—The Herbert Boiler Co., Chicago, Ill.  
 Hibben & Co., Chicago, Ill.  
 Holmes & Co., J. H., Rutland, Vt.  
 Holt Mfg. Co., The, Stockton, Cal.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 ♦ H. S. G.—Houston Stanwood & Gamble Co., Cincinnati, O.  
 International Boiler Works Co., The, E. Stroudsburg, Pa.  
 International Engineering Works, Inc., Framingham, Mass.  
 Iowa Mfg. Co., Oskaloosa, Ia.  
 Jamestown Boiler Works, Jamestown, N. Y.  
 Keeler—E. Keeler Co., Williamsport, Pa.  
 Keely Boiler Works, J., Jackson, Mich.  
 Kewanee Boiler Co., Kewanee, Ill.  
 Kroeschell—Kroeschell Bros. Co., Chicago, Ill.  
 Lappan Mfg. Co., The, James, Pittsburg, Pa.  
 Leffel—The James Leffel & Co., Springfield, O.  
 Leslie, Elliott & Co., Paterson, N. J.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 Lily—J. M. Ettinger, Chicago, Ill.  
 Link Belt Supply Co., Minneapolis, Minn.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Lufkin Foundry & Machine Co., Lufkin, Tex.  
 Maning—Bigelow Co., The, New Haven, Conn.  
 Marshall, Wm., Steam Boiler Works, Dubuque, Iowa.  
 McCartney Boiler Co., Mobile, Ala.  
 Michelmann Steel Construction Co., Quincy, Ill.  
 Milwaukee Boiler Mfg. Co., The, Milwaukee, Wis.

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 Morris Co., I. F., Philadelphia, Pa.  
 Munroe & Sons Mfg. Corp., R., Pittsburg, Pa.  
 Murray—Murray Iron Works, Burlington, Ia.  
 Muskegon Boiler Works, Muskegon, Mich.  
 Myer, Geo. J., Mfg. Co., Milwaukee, Wis.  
 Nagle—Nagle Engine & Boiler Works, Erie, Pa.  
 National Tube Co., Pittsburg, Pa.  
 O'Brien—John O'Brien Boiler Works Co., St. Louis.  
 Ohio Machine & Boiler Co., The, Cleveland, O.  
 Oilwell Supply Co., Pittsburg, Pa.  
 ♦ Orr & Sombower, Inc., Reading, Pa.  
 Pennsylvania—Pennsylvania Boiler Works, Erie, Pa.  
 Porcupine Company, The, Bridgeport, Conn.  
 Prospect Boiler Co., The, New Brunswick, N. J.  
 Reading Scale & Machine Co., Reading, Pa.  
 Rummell Dawley Mfg. Co., St. Louis, Mo.  
 Scannell Boiler Works, Lowell, Mass.  
 Schofield—J. S. Schofield's Sons Co., Macon, Ga.  
 Severs Mfg. Co., Oskaloosa, Ia.  
 Sharkey & Peck, Chicago, Ill.  
 ♦ Sinker-Davis Co., The, Indianapolis, Ind.  
 Smith & Son Co., Samuel, Paterson, N. J.  
 Southern Engine & Boiler Works, Jackson, Tenn.  
 The Milwaukee Boiler Co., Milwaukee, Wis.  
 Titusville—The Titusville Iron Works Co., Titusville, Pa.  
 Tri-State—Tri-State Engineering Co., Zanesville, Ohio.  
 Tudor Boiler Mfg. Co., The, Cincinnati, O.  
 Uniflow—J. K. Petty & Co., Inc., Philadelphia, Pa.  
 Union Boiler & Mfg. Co., Lebanon, Pa.  
 Union Iron Works, Erie, Pa.  
 Union Iron Works, Selma, Ala.  
 United Iron Works Co., Springfield, Mo.  
 Valk & Murdock Co., Charleston, S. C.  
 Vance Boiler Works, Geneva, N. Y.  
 Vogt, Henry, Machine Co., Louisville, Ky. (return)  
 Walsh Boiler & Iron Works, The, Springfield, Mass.  
 Walsh, Ed. (Superior Boiler Works), Marion, Ind.  
 Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.  
 Walton, C. J., & Son, Louisville, Ky.  
 Warren Boiler Wks., Warren, O.  
 Weintz Bros., Evansville, Ind.  
 Wickes Boiler Co., Saginaw, Mich.  
 Wholey Boiler Works, Providence, R. I.  
 Wickes—Wickes Boiler Co., The, Saginaw, Mich.

**BOILERS, TUBULAR, PORTABLE.**

Bate Patent—W. T. Bate & Son, Conshohocken, Pa.  
 Bay City Iron Company, Bay City, Mich.  
 Beggs & Co., James, New York, N. Y.  
 Brennan & Co., The, Chattanooga, Tenn.  
 C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Columbiana Boiler Co., Columbiana, O.  
 Electric—Bovaird & Seyfang Mfg. Co., Bradford, Pa.  
 Electric—Oil City Boiler Works, Oil City, Pa.  
 Erie City Iron Works, Erie, Pa.  
 Farrar & Trefts, Inc., Buffalo, N. Y.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 Godfrey-Keeler Co., New York, N. Y.  
 ♦ H. S. G.—Houston Stanwood & Gamble Co., Cincinnati, O.  
 Improved Appliance Co., Brooklyn, N. Y. (gas).  
 Keller Co., E., Williamsport, Pa.  
 Leffel—James Leffel & Co., Springfield, O.  
 Leidecker Tool Co., Marietta, O.  
 Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
 Nagle Engine & Boiler Co., Erie, Pa.  
 New Era—Liddell Co., Charlotte, N. C.  
 Oil Well Supply Co., Pittsburg, Pa.  
 Ryan—Sistersville Boiler Works, Sistersville, W. Va.  
 Toledo Boiler Works Co., Toledo, O.  
 Vance Boiler Works, Geneva, N. Y.  
 Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.

**BOILERS, VERTICAL.**

Akerlund & Semmes, Inc., New York, N. Y.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Bay City Iron Co., Bay City, Mich.  
 Beach, H. B., & Son, Hartford, Conn.  
 Bigelow—Manning—Bigelow Co., The, New Haven, Conn.  
 Bovaird & Seyfang Mfg. Co., Bradford, Pa.  
 Brennan & Co., John, Detroit, Mich.  
 Brownell Co., The, Dayton, Ohio.  
 Byers, John F., Machine Co., Ravenna, Ohio.  
 Chandler & Taylor Co., Indianapolis, Ind.  
 C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
 Columbus Steam Boiler & Heater Co., Columbus, O.

C. V.—Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Dillon, D. M., Steam Boiler Works, Fitchburg, Mass.  
 Drake-Williams-Mount Co., Omaha, Neb.  
 Farquhar—A. B. Farquhar Co., Ltd., York, Pa.  
 Freeman Mfg. Co., Racine, Wis.  
 Frost Mfg. Co., Galesburg, Ill.  
 Gam City Boiler Works, Dayton, O.  
 Godfrey-Keeler Co., New York, N. Y.  
 Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Improved Appliance Co., Brooklyn, N. Y. (gas).  
 International Boiler Works Co., East Stroudsburg, Pa.  
 International Engineering Works, Inc., Framingham, Mass.  
 Keeler Co., E., Williamsport, Pa.  
 Leffel—The James Leffel & Co., Springfield, O.  
 Little Giant—Dutton, C. H., Co., The, Kalamazoo, Mich.  
 Marine Boiler Works Co., The, Toledo, O.  
 Mahoney, A. D., Troy, N. Y.  
 Munroe & Sons Mfg. Corp., R., Pittsburg, Pa.  
 Murray—Murray Iron Works Co., Burlington, Ia.  
 Nagle—Nagle Engine & Boiler Works, Erie, Pa.  
 O'Brien Boiler Works, John, St. Louis, Mo.  
 Orr & Sembower, Inc., Reading, Pa.  
 Portland Co., The, Portland, Me.  
 Sharon Boiler Works, Wheatland Road, Sharon, Pa.  
 Smith & Son Co., Samuel, Paterson, N. J.  
 Uniflow—J. K. Petty & Co., Inc., Philadelphia, Pa.  
 Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.  
 Wickes Bros., Saginaw, Mich.

#### BOILERS, VULCANIZING.

Reliance—Milwaukee Reliance Boiler Wks., Milwaukee, Wis.

#### BOILERS, WASTE HEAT.

Heine Boiler Co., St. Louis, Mo.

#### BOILERS, WATER TUBE

Almy Water Tube Boiler Co., Providence, R. I.  
 A. & R.—Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Badenhausen—Badenhausen Co., Philadelphia, Pa.  
 Baisley Iron Works, The John, Philadelphia, Pa.  
 Bass Foundry & Machine Co., The, Ft. Wayne, Ind.  
 Beach, H. B., & Son, Hartford, Conn.  
 Berry—Robert Wetherill & Co., Inc., Chester, Pa.  
 Berry—The Berry Engineering Co., Chester, Pa.  
 Bigelow-Hornsby—The Bigelow Co., New Haven, Conn.  
 Brennan & Co., John, Detroit, Mich.  
 Brownell Co., The, Dayton, O.  
 Butman—Manistee Iron Works Co., Manistee, Mich.  
 Central Boiler Works, Grand Rapids, Mich.  
 C. H.—Casey-Hedges Co., The, Chattanooga, Tenn.  
 Connolly Boiler Co., The D., Cleveland, Ohio.  
 Dearing Water Tube Boiler Co., Detroit, Mich.  
 Economic—Erie City Iron Works, Erie, Pa.  
 Edge Moor—Edge Moor Iron Co., Edge Moor, Del.  
 Flanner Water Tube Boiler Co., Akron, O.  
 Franklin—Nagle Engine & Boiler Works, Erie, Pa.  
 Freeman Mfg. Co., Racine, Wis.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 Griffiths, James A., Philadelphia, Pa.  
 Heine Boiler Co., St. Louis, Mo.  
 Hohenstein—Oil City Boiler Works, Oil City, Pa.  
 Improved Appliance Co., Brooklyn, N. Y. (gas).  
 International Engineering Works, Inc., Framingham, Mass.  
 Keystone Boiler & Foundry Co., Landisville, Pa.  
 Kroeschell—Kroeschell Bros. Co., Chicago, Ill.  
 Keeler—E. Keeler Co., Williamsport, Pa.  
 Kidwell Ring-Flow—Kidwell Boiler & Engineering Co., Milwaukee, Wis.  
 Kingsford Foundry & Machine Works, Oswego, N. Y.  
 Kingsford Foundry & Machine Works, Oswego, N. Y.  
 The McNaull—The W. D. McNaull Co., Toledo, O.  
 Marine Iron Works, Chicago, Ill.  
 Miller, Charles E., Anderson, Ind.  
 Milne—George T. Ladd Co., Pittsburgh, Pa.  
 Mohr, John, & Sons, Chicago, Ill.  
 Morrison—Sharon Boiler Works, Sharon, Pa.  
 Munroe Patent Safety—Munroe & Sons Mfg. Corp., R., Pittsburg, Pa.  
 Murray Iron Works, Burlington, Ia.  
 Nott Iron & Brass Works, White River Jet, Vt.  
 Oil City—Oil City Boiler Works, Oil City, Pa.  
 Oswego—A. D. Granger Co., Inc., New York, N. Y.  
 O. W. S.—Oil Well Supply Co., Pittsburgh, Pa.  
 Page (self-contained)—Page Boiler Co., Chicago, Ill.  
 Parker Downflow—Pardel Corp., Philadelphia, Pa.  
 Porcupine—Porcupine Company, Bridgeport, Conn.  
 Roberts—Roberts Safety Water Tube Boiler Co., Red Bank, N. J.  
 Root—Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Seabury—Gas Engine & Power Co., New York, N. Y.  
 Springfield Boiler Co., Springfield, Ill.  
 Star—A. D. Granger Co., Inc., New York, N. Y.  
 Sterling Rust—Babcock & Wilcox Co., New York, N. Y.  
 Toledo Ship Building Co., Toledo, O.  
 Union—Union Iron Works, Erie, Pa.  
 Vogt, Henry, Machine Co., The, Louisville, Ky.

Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.  
 Walton, C. J., & Son, Louisville, Ky.  
 Ward, Chas., The, Engineering Works, Charleston, W. Va.  
 Wickes Boiler Co., Saginaw, Mich.  
 Wilkinson—Oil Well Supply Co., Pittsburg, Pa.  
 Worthington—James Beggs & Co., New York, N. Y.  
 Young & Sons, E. R., Titusville, Pa.

#### BOLT ENDS.

American Bolt Co., Birmingham, Ala.  
 American Equipment Co., Norristown, Pa.  
 Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
 Bethlehem Steel Co., South Bethlehem, Pa.  
 Buffalo Bolt Co., Buffalo, N. Y.  
 Haskell Mfg. Co., W. H., Pawtucket, R. I.  
 Lake Erie Bolt & Nut Co., Cleveland, O.  
 Lamson & Sessions Co., Cleveland, O.  
 Lanz, M., & Sons, Pittsburgh, Pa.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 Modern Mfg. Co., The, Cleveland, O.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scranton Bolt & Nut Co., Scranton, Pa.

#### BOLTS, BLANK.

American Bolt Co., Birmingham, Ala.  
 American Equipment Co., Norristown, Pa.  
 Bethlehem Steel Co., Bethlehem, Pa.  
 Buffalo Bolt Co., Buffalo, N. Y.  
 Falls Rivet Co., Kent, Ohio.  
 Lanz, M., & Sons, Pittsburgh, Pa.  
 Lamson & Sessions Co., Cleveland, O.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Paragon Tool Co., Seattle, Wash.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scranton Bolt & Nut Co., Scranton, Pa.

#### BOLTS, BOILER PATCH.

Bethlehem Steel Co., South Bethlehem, Pa.  
 Chicago Screw Co., The, Chicago, Ill.  
 Detroit Screw Works, Detroit, Mich.  
 Hartford Machine Screw Co., Hartford, Conn.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Paragon Tool Co., Seattle, Wash.  
 Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.  
 Worcester Machine Screw Co., Worcester, Mass.

#### BOLTS, BOILER STAY.

American—American Flexible Bolt Co., Pittsburgh, Pa.  
 Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
 Bethlehem Steel Co., Bethlehem, Pa.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Davis & Hemphill, Elkhridge, Md.  
 Detroit—Detroit Seamless Steel Tubes Co., Detroit, Mich. (hollow).  
 Fort Wayne Rolling Mill Works, Fort Wayne, Ind.  
 Haskell Mfg. Co., Wm. H., Pawtucket, R. I.  
 Mathew Lanz & Sons, Pittsburgh, Pa.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 O'Leary, Arthur J., & Son Co., Chicago, Ill.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Otis Co., Spencer, Chicago, Ill.  
 Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
 Republic Iron & Steel Co., Youngstown, O.  
 St. Louis Screw Co., St. Louis, Mo.  
 Tate—The Flannery Bolt Co., Pittsburgh, Pa.

#### BOLTS, BRASS AND COPPER.

Acheson Mfg. Co., Braudock, Pa.  
 Columbus Brass Co., The, Columbus, O.  
 Delaware Steel Co., New York, N. Y.  
 Edna Co., The, Cincinnati, O.  
 Franklin Moore Co., Winsted, Conn.  
 Gaskell, Wm., & Son, Brooklyn, N. Y.  
 Haskell, William H., Mfg. Co., Pawtucket, R. I.  
 Heiland's—Geo. W. Heiland, New York, N. Y.  
 Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
 National Marine Lamp Co., Forestville, Conn.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 Speakman Co., Wilmington, Del.  
 St. Louis Screw Co., St. Louis, Mo.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Waltham Appliance Co., Waltham, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### BOLTS, BRIDGE AND ROOF.

American Equipment Co., Norristown, Pa.  
 Bethlehem Steel Co., South Bethlehem, Pa.



- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Judson Mfg. Co., San Francisco, Cal.
- ◆ Lake Erie Bolt & Nut Co., Cleveland, O.
- ◆ Lanz & Sons, M., Pittsburg, Pa.
- ◆ McGookin & Co., D. H., Philadelphia, Pa.
- ◆ Oliver Iron & Steel Co., Pittsburg, Pa.
- ◆ Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
- ◆ Pittsburgh Rivet Co., Pittsburgh, Pa.
- ◆ Pittsburgh Screw & Bolt Co., Pittsburg, Pa.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- ◆ Scranton Bolt & Nut Co., Scranton, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BOLTS, CARRIAGE.**

- American Equipment Co., Norristown, Pa.
- ◆ American Iron & Steel Mfg. Co., Lebanon, Pa.
- ◆ Anchor Bolt & Nut Co., Poughkeepsie, N. Y.
- ◆ Atlas-Atlas Bolt & Screw Co., Cleveland, O.
- ◆ Bayonne Bolt & Nut Co., Bayonne, N. J.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Boss Nut Co., Chicago, Ill.
- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Buckeye-Lamson & Sessions Co., Cleveland, O.
- ◆ Buffalo Bolt Co., Buffalo, N. Y.
- ◆ Clark Bros. Bolt Co., Milldale, Conn.
- ◆ Columbus Bolt Works Co., Columbus, O.
- ◆ Continental Bolt & Iron Works, Chicago, Ill.
- ◆ Eagle Bolt & Forging Co., Cleveland, O.
- ◆ Falls Rivet Co., Kent, Ohio.
- ◆ Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- ◆ Franklin Moore Co., Winsted, Conn.
- ◆ Gary Screw & Bolt Co., Chicago, Ill.
- ◆ Graham Nut Co., Pittsburg, Pa.
- ◆ Hallett Iron Works, The, Harvey, Ill.
- ◆ Lake Erie Bolt & Nut Co., Cleveland, O.
- ◆ Lanz & Sons, Mathew, Pittsburg, Pa.
- ◆ Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- ◆ Michigan Bolt & Nut Mfg. Co., Detroit, Mich.
- ◆ Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
- ◆ National-National Screw & Tack Co., Cleveland, O.
- ◆ Ohio Nut & Bolt Co., Berea, Ohio.
- ◆ O'Leary, Arthur J., & Sons Co., Chicago, Ill.
- ◆ Perfection-Foster Bolt & Nut Mfg. Co., Cleveland, Ohio.
- ◆ Oliver-Oliver Iron & Steel Co., Pittsburg, Pa.
- ◆ Philadelphia-Lamson & Sessions Co., Cleveland, O.
- ◆ Republic Iron & Steel Co., Youngstown, O.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Chester, N. Y.
- ◆ Standard Bolt Co., Columbus, O.
- ◆ St. Louis Screw Co., St. Louis, Mo.
- ◆ Scranton Bolt & Nut Co., Scranton, Pa.
- ◆ Topping Bros., New York, N. Y.

**BOLTS, CLOSET.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- ◆ Ampinco-American Pin Co., Waterbury, Conn.
- ◆ Ansonia Mfg. Co., Ansonia, Conn.
- ◆ Bernz Co., Otto, Newark, N. J.
- ◆ Brey & Krause Mfg. Co., Allentown, Pa.
- ◆ Chicago Nut Co., Chicago, Ill.
- ◆ Equipoise Co., The, Waterbury, Conn.
- ◆ Flannery, P. J., Co., New Britain, Conn.
- ◆ Frank Bros., New York, N. Y.
- ◆ Glauber Brass Mfg. Co., Cleveland, O.
- ◆ Lanz, M. & Sons, Pittsburg, Pa.
- ◆ Nelson, N. O., Mfg. Co., St. Louis, Mo.
- ◆ Prier Brass Mfg. Co., Kansas City, Mo.
- ◆ Richardson, Edro, Brass Co., Baltimore, Md.
- ◆ Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.
- ◆ Waterbury Mfg. Co., Waterbury, Conn.
- ◆ Wolverine Brass Works, Grand Rapids, Mich.
- ◆ Woodward-Wanger Co., Philadelphia.

**BOLTS, CLOSET DOOR INDICATOR.**

- Edwardsville Brass Works, Edwardsville, Ill.

**BOLTS, COLLAR.**

- ◆ Belco-The Bell Company, Buffalo, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BOLTS, CONNECTING ROD.**

- ◆ Atlas Bolt & Screw Co., Cleveland, O.
- ◆ Belco-The Bell Company, Buffalo, N. Y.
- ◆ Cleveland Wrought Products Co., Cleveland, O.
- ◆ Ferry Cap & Set Screw Co., Cleveland, O.
- ◆ Muncie Cap & Set Screw Co., Muncie, Ind.

**BOLTS, FOR SETTING IN CONCRETE.**

- Chicago Expansion Bolt Co., Chicago, Ill.
- Modern Mfg. Co., The, Cleveland, O.

**BOLTS, COUNTERSUNK.**

- ◆ Belco-The Bell Company, Buffalo, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Lanz, Matthew & Sons, Pittsburg, Pa.
- ◆ Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- ◆ Oliver Iron & Steel Co., Pittsburg, Pa.
- ◆ Scranton Bolt & Nut Co., Scranton, Pa.

- St. Louis Screw Co., St. Louis, Mo.
- Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**BOLTS, COUPLING.**

- ◆ Belco-The Bell Company, Buffalo, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Buffalo Bolt Co., Buffalo, N. Y.
- ◆ Chicago Screw Co., The, Chicago, Ill.
- ◆ Curtis Screw Co., The, Buffalo, N. Y.
- ◆ Detroit Screw Works, Detroit, Mich.
- ◆ Ferry-Ferry Cap & Set Screw Co., Cleveland, O.
- ◆ Haskell, Wm. H., Mfg. Co., Pawtucket, R. I.
- ◆ Metals Welding Co., Cleveland, O.
- ◆ Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
- ◆ Niagara Screw Co., Buffalo, N. Y.
- ◆ Oliver Iron & Steel Co., Pittsburg, Pa.
- ◆ Rochester Machine Screw Co., Rochester, N. Y.
- ◆ St. Louis Screw Co., St. Louis, Mo.
- ◆ Western Automatic Machine Screw Co., The, Elyria, Ohio.

**BOLTS, DECK.**

- St. Louis Screw Co., St. Louis, Mo.

**BOLTS, DRIFT.**

- Ames, W., & Co., Jersey City, N. J.
- Continental Bolt & Iron Works, Chicago, Ill.
- Michigan Bolt & Nut Works, Detroit, Mich.
- St. Louis Screw Co., St. Louis, Mo.
- Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**BOLTS, ELEVATOR BUCKET.**

- American Screw Co., Providence, R. I.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Clark Bros. Bolt Co., Milldale, Conn.
- ◆ Columbus Bolt Works Co., Columbus, O.
- ◆ Howe Chain Co., Muskegon, Mich.
- ◆ Jeffrey-Jeffrey Mfg. Co., Columbus, O.
- ◆ Lamson & Sessions Co., Cleveland, O.
- ◆ Link-Belt Company, Chicago and Philadelphia.
- ◆ Union Nut & Bolt Co., New York, N. Y.

**BOLTS, EXPANSION.**

- Ackerman-Johnson Co., Chicago, Ill.
- ◆ Ahlstrom-Steward & Romaine Mfg. Co., Philadelphia, Pa.
- ◆ Ajax-Chicago Nut Co., Chicago, Ill.
- ◆ Ampinco-American Pin Co., Waterbury, Conn.
- ◆ Ankyra-Ankyra Mfg. Co., Philadelphia, Pa.
- ◆ Barretts N. U.-Barrett Sales Co., The, Chicago, Ill.
- ◆ Beekman-Garrison Brass & Machine Works, New York.
- ◆ Brohard-The Brohard Co., Philadelphia, Pa.
- ◆ Chicago Expansion Bolt Co., Chicago, Ill.
- ◆ Church's-Isaac Church Expansion Bolt Co., South Norwalk, Conn.
- ◆ Cinch-National Lead Co., New York, N. Y.
- ◆ Columbus-The Columbus Brass Co., Columbus, O.
- ◆ Crescent-Estate, F. H. Evans, Brooklyn, N. Y.
- ◆ Crown-Diamond Expansion Bolt Co., New York.
- ◆ Diamond-Diamond Expansion Bolt Co., New York.
- ◆ Duplex-Isaac Church Expansion Bolt Co., South Norwalk, Conn.
- ◆ Evans-Estate, F. H. Evans, Brooklyn, N. Y.
- ◆ F. & M.-Fee & Mason Mfg. Co., New York, N. Y.
- ◆ Keystone-Diamond Expansion Bolt Co., New York.
- ◆ Lanz, M., & Sons, Pittsburg, Pa.
- ◆ McCabe-McCabe Hanger Mfg. Co., The, New York, N. Y.
- ◆ Monarch-Monarch Expansion Bolt Co., Duluth, Minn.
- ◆ O. K.-Isaac Church Expansion Bolt Co., South Norwalk, Conn.
- ◆ Oliver Iron & Steel Co., Pittsburg, Pa.
- ◆ Paine-The Paine Co., Chicago, Ill.
- ◆ Parker Expansion Bolt Co., New York.
- ◆ Perfect-Isaac Church Expansion Bolt Co., South Norwalk, Conn.
- ◆ Philadelphia-Steward & Romaine Mfg. Co., Philadelphia, Pa.
- ◆ Phillips-Garrison Brass & Mach. Works, New York.
- ◆ Positive-Steward & Romaine Mfg. Co., Philadelphia, Pa.
- ◆ Sebco-Star Expansion Bolt Co., New York, N. Y.
- ◆ S. & R.-Steward & Romaine Mfg. Co., Philadelphia.
- ◆ U. S. E.-U. S. Expansion Bolt Co., New York, N. Y.
- ◆ Van-Van Expansion Bolt Mfg. Co., Chicago, Ill.
- ◆ Walworth Mfg. Co., Boston, Mass.

**BOLTS, EYE, HOOK, AND RING.**

- ◆ Billings & Spencer Co., The, Hartford, Conn.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Chain Products Co., The, Cleveland, O.
- ◆ Continental Bolt & Iron Works, Chicago, Ill.
- ◆ Garland Nut & River Co., Pittsburg, Pa.
- ◆ Hallett Iron Works, The, Harvey, Ill.
- ◆ Jenckes E. Mfg. Co., Worcester, Mass.
- ◆ Lakeside Forge Co., Erie, Pa.
- ◆ Lamson & Sessions Co., The, Cleveland, O.
- ◆ Laughlin, Thomas, Co., The, Portland, Me.
- ◆ Marine Hardware Equipment Co., S. Portland, Me.
- ◆ Michigan Bolt & Nut Works, Detroit, Mich.



- Modern Mfg. Co., The, Cleveland, O.  
 National Tool Co., Brooklyn, N. Y.  
 New England Bolt Co., Inc., Everett, Mass.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 ♦ United States Chain and Forging Co., Pittsburgh, Pa.  
 U. W.—The Upson-Walton Co., Cleveland, O.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Williams & Co., J. H., Brooklyn, N. Y.  
 Wire Goods Co., The, Worcester, Mass.

**BOLTS, FITTING-UP.**

- St. Louis Screw Co., St. Louis, Mo.

**BOLTS, FLATTENED END**

- Modern Mfg. Co., The, Cleveland, Ohio.

**BOLTS, FORGED.**

- National Bolt & Nut Co., Pittsburgh, Pa.  
 St. Louis Screw Co., St. Louis, Mo.

**BOLTS, FOUNDATION.**

- Kansas City Bolt & Nut Co., Kansas City, Mo.  
 Pittsburgh Rivet Co., Pittsburgh, Pa.

**BOLTS, GALVANIZED.**

- Ames & Co., W., Jersey City, N. J.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 St. Louis Screw Co., St. Louis, Mo.  
 U. W.—The Upson-Walton Co., Cleveland, O.

**BOLTS, HANGER.**

- American Screw Co., Providence, R. I.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Falls Rivet Co., Kent, Ohio.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 National Marine Lamp Co., The, New York, N. Y.  
 ♦ National—National Screw and Tack Co., Cleveland, O.  
 Seaman, A. C., Philadelphia, Pa.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Vandegift & Morris, The, Shelbyville, Ind.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Woods, T. B., Sons Co., Chambersburg, Pa.

**BOLTS, INDICATOR, FOR CLOSET DOORS.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Nelson, N. O. Mfg. Co., St. Louis, Mo.

**BOLTS, IRON.**

(See also specific heads.)

- American Bridge Co. of New York, N. Y.  
 American Equipment Co., Norristown, Pa.  
 American Screw Co., Providence, R. I.  
 Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
 Atlas Bolt & Screw Co., Cleveland, O.  
 Bayonne Bolt & Nut Co., Bayonne, N. J.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Blake & Johnson Co., Warburg, Conn.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 ♦ Clark Bros. Bolt Co., Milldale, Conn.  
 ♦ Corbin Screw Corp., New Britain, Conn.  
 Delaware Steel Company, New York, N. Y.  
 Detroit Screw Works, Detroit, Mich.  
 Erie Forge Co., Erie, Pa.  
 Frank, M. K., Pittsburgh, Pa.  
 Franklin Moore Co., Winsted, Conn.  
 Garland Nut & Rivet Co., Pittsburgh, Pa.  
 Gary Screw & Bolt Co., Chicago, Ill.  
 Gaskell, Wm., & Son, Brooklyn, N. Y.  
 ♦ Graham Nut Co., Pittsburgh, Pa.  
 Griffin Mfg. Co., Erie, Pa.  
 Hartford Machine Screw Co., Hartford, Conn.  
 Hirsch Rolling Mill Co., St. Louis, Mo.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Illinois Bolt, Nut & Forging Co., Chicago, Ill.  
 Inland Steel Co., Chicago, Ill.  
 Judson Mfg. Co., San Francisco, Cal.  
 Lanz & Sons, Matthew, Pittsburgh, Pa.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 Milton Mfg. Co., Milton, Pa.  
 ♦ National Acme Mfg. Co., Cleveland, O.  
 Neely Nut & Bolt Co., Pittsburgh, Pa.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 Ohio Nut & Bolt Co., Berea, O.  
 O'Leary & Son Co., Arthur J., Chicago, Ill.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pittsburgh Forge & Iron Co., Pittsburgh, Pa.  
 Pittsburgh Rivet Co., Pittsburgh, Pa.  
 Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
 Reed & Prince Mfg. Co., Worcester, Mass.  
 Rhode Island Tool Co., Providence, R. I.  
 ♦ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

- Specialty Bolt & Rivet Co., Shelton, Conn.  
 Steel Car Forge Co., Pittsburg, Pa.  
 Standard Nut & Bolt Co., Valley Falls, R. I.

**BOLTS, KING.**

- ♦ Ferry Cap & Set Screw Co., Cleveland, O.  
 Steel Specialties Co., Wakefield, Mass.

**BOLTS, LAG.**

- ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Boss Nut Co., Chicago, Ill.  
 Columbus Bolt Works Co., Columbus, Ohio.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 ♦ Lake Erie Bolt & Nut Co., Cleveland, O.  
 Lanz, M., & Sons, Pittsburgh, Pa.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.

**BOLTS, LOOM.**

- ♦ Haskell Mfg. Co., W. H., Pawtucket, R. I.  
 Lanz, M., & Sons, Pittsburgh, Pa.

**BOLTS, MACHINE.**

- ♦ American Bolt Co., Birmingham, Ala.  
 American Equipment Co., Norristown, Pa.  
 Ames, W., & Co., Jersey City, N. J.  
 Anchor Bolt & Nut Co., Poughkeepsie, N. Y.  
 Anthony Screw Co., Worcester, Mass.  
 Atlas—Atlas Bolt & Screw Co., Cleveland, O.  
 Automatic Products Corp., Long Island City, N. Y.  
 Bayonne Bolt & Nut Co., Bayonne, N. J.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Boss Nut Co., Chicago, Ill.  
 Bourne-Fuller Co., The, Cleveland, O.  
 Buffalo Bolt & Iron Co., Buffalo, N. Y.  
 ♦ Clark Bros. Bolt Co., Milldale, Conn.  
 Columbus Bolt Works Co., Columbus, O.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Eastern Bolt & Nut Co., Providence, R. I.  
 Edward—Edward Valve & Mfg. Co., Chicago, Ill.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Falls Rivet Co., Kent, O.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Gary Screw & Bolt Co., Chicago, Ill.  
 Grabler Sure Lock—Grabler Mfg. Co., Cleveland, O.  
 ♦ Graham Nut Co., Pittsburgh, Pa.  
 Hallett Iron Works, The, Harvey, Ill.  
 Haskell, W. H., Mfg. Co., Pawtucket, R. I.  
 ♦ Hoopes & Townsend Co., Philadelphia, Pa.  
 Kirk-Latty Mfg. Co., The, Cleveland, O.  
 ♦ Lake Erie Bolt & Nut Co., Cleveland, O.  
 ♦ Lamson & Sessions Co., The, Cleveland, O.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 McCabe—The McCabe Hanger Mfg. Co., New York, N. Y.  
 Merrill Brothers, Maspeth, New York, N. Y.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 Modern Mfg. Co., The, Cleveland, O.  
 Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
 Morrow Mfg. Co., Elmira, N. Y.  
 Muncie Cap & Set Screw Co., Muncie, Ind.  
 ♦ National—National Screw & Tack Co., Cleveland, O.  
 Norris, W. C., Tulsa, Okla.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 O'Leary, Arthur J., & Son Co., Chicago, Ill.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Perfection—Foster Bolt & Nut Mfg. Co., Cleveland, Pa.  
 Pittsburgh Rivet Co., Pittsburgh, Pa.  
 ♦ Republic Iron & Steel Co., Youngstown, O.  
 Rockford Bolt Co., Rockford, Ill.  
 ♦ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 Standard Bolt Co., Columbus, O.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 Standard Nut & Bolt Co., Valley Falls, R. I.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Topping Bros., New York, N. Y.

**BOLTS, MONEL METAL**

- Bayonne Bolt & Nut Co., Bayonne, N. J.

**BOLTS, MUNTZ METAL AND TOBIN BRONZE**

- Haskell Mfg. Co., W. H., Pawtucket, R. I.

**BOLTS, FLANER HEAD.**

- Belco—The Bell Company, Buffalo, N. Y.  
 Cad—Standard Shop Equipment Co., Philadelphia, Pa.  
 Chicago Screw Co., The, Chicago, Ill.  
 Detroit Screw Works, Detroit, Mich.  
 Hartford Machine Screw Co., Hartford, Conn.  
 Niagara Screw Co., Buffalo, N. Y.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.  
 Worcester Machine Screw Co., Worcester, Mass.

**BOLTS, FLOW.**

- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Clark Bros. Bolt Co., Milldale, Conn.
- ◆ Columbus Bolt Works Co., Columbus, O.
- ◆ Falls Rivet Co., Kent, Ohio.
- ◆ Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- ◆ Lake Erie Bolt & Nut Co., Cleveland, O.
- ◆ Lamson & Sessions Co., The, Cleveland, O.
- ◆ Michigan Bolt & Nut Works, Detroit, Mich.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- ◆ Standard Bolt Co., Columbus, O.

**BOLTS, PORCELAIN HEAD.**

- Fairfacts Co., New York, N. Y.
- Hutter, Karl, Inc., New York, N. Y.

**BOLTS AND RIVETS, STEEL.**

- ◆ Atlas Bolt & Screw Co., Cleveland, O.
- ◆ Lamson & Sessions Co., Cleveland, O.

**BOLTS, SINK, STOVE AND TIRE.**

- ◆ American Screw Co., Providence, R. I.
- ◆ Barber Mfg. Co., The, Ashtabula, O.
- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Corbin Screw Corp., New Britain, Conn.
- ◆ Eagle Bolt & Forging Co., Cleveland, O.
- ◆ Falls Rivet Co., Kent, Ohio.
- ◆ Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- ◆ Grabler Universal-Grabler Mfg. Co., Cleveland, O.
- ◆ National—National Screw & Tack Co., Cleveland, O.
- ◆ Ohio Nut & Bolt Co., The, Berea, O.
- ◆ Perfection—Foster Bolt & Nut Mfg. Co., Cleveland, Ohio.
- ◆ Reed & Prince Mfg. Co., Worcester, Mass.
- ◆ Reidy Machine Screw Co., New Haven, Conn.
- ◆ Rodd's Pat.—Lamson & Sessions Co., The, Cleveland, O.
- ◆ Rundle Mfg. Co., Milwaukee, Wis.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- ◆ Sanitary Company of America, Linfield, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.
- ◆ Wolverine Brass Works, Grand Rapids, Mich.
- ◆ Woodward-Wanger Co., Philadelphia, Pa.

**BOLTS, SPRING.**

- Belco—The Bell Company, Buffalo, N. Y.
- Empress—Bowen Products Corp., Auburn, N. Y.
- Fostoria Screw Co., Fostoria, O.

**BOLTS, STEP.**

- Eagle—Eagle Bolt & Forging Co., Cleveland, O.
- Falls Rivet Co., Kent, O.

**BOLTS, STUD.**

- ◆ American Bolt Co., Birmingham, Ala.
- ◆ Belco—The Bell Company, Buffalo, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Buffalo Bolt Co., Buffalo, N. Y.
- ◆ Buffalo Nipple & Machine Co., Inc., Buffalo, N. Y.
- ◆ Continental Bolt & Iron Works, Chicago, Ill.
- ◆ Detroit Screw Works, Detroit, Mich.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Lake Erie Bolt & Nut Co., Cleveland, O.
- ◆ Lamson & Sessions Co., The, Cleveland, O.
- ◆ Michigan Bolt & Nut Works, Detroit, Mich.
- ◆ Muncie Cap & Set Screw Co., Muncie, Ind.
- ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.
- ◆ Paragon Tool Co., Seattle, Wash.
- ◆ Russell—Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- ◆ Scranton Bolt & Nut Co., Scranton, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BOLTS, TAP.**

- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- ◆ Belco—The Bell Company, Buffalo, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Buffalo Bolt Co., Buffalo, N. Y.
- ◆ Haskell, W. H., Mfg. Co., Pawtucket, R. I.
- ◆ Lake Erie Bolt & Nut Co., Cleveland, O.
- ◆ Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- ◆ Michigan Bolt & Nut Works, Detroit, Mich.
- ◆ National—National Screw & Tack Co., Cleveland, O.
- ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.
- ◆ Pawtucket Mfg. Co., Pawtucket, R. I.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BOLTS, T HEADED.**

- Cad—Standard Shop Equipment Co., Philadelphia, Pa.
- Lang—F. J. McCoy, Erie, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BOLTS, TIE ROD & KING.**

- Bowen Products Corp., Auburn, N. Y.

**BOLTS, TOGGLE OR ANCHOR.**

- Ajax—Chicago Nut Co., Chicago, Ill.
- Ankyra—Ankyra Mfg. Co., Wayne Junction, Philadelphia, Pa.
- Barretts—The Barretts Sales Co., Chicago, Ill.
- Beekman—Garrison Brass & Machine Works, New York, N. Y.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Brohard—The Brohard Co., Philadelphia, Pa.
- Chicago Expansion Bolt Co., Chicago, Ill.
- Church—Isaac Church Expansion Bolt Co., South Norwalk, Conn.
- Crescent—The Crescent Co., Chicago, Ill.
- Crescent—McGill Mfg. Co., Valparaiso, Ind.
- Diamond—Diamond Expansion Bolt Co., New York.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- McGill Mfg. Co., Valparaiso, Ind.
- Modern Mfg. Co., The, Cleveland, Ohio.
- Omega—Diamond Expansion Bolt Co., New York.
- Paine—The Paine Co., Chicago, Ill.
- Philadelphia—Steward & Romaine Mfg. Co., Philadelphia, Pa.
- Phillips—Garrison Brass & Machine Works, New York.
- Sebco—Star Expansion Bolt Co., New York, N. Y.
- St. Louis Screw Co., St. Louis, Mo.
- U. S. E.—United States Expansion Bolt Co., New York.
- Wolverine Brass Works, Grand Rapids, Mich.
- Wrigley—Steward & Romaine Mfg. Co., Philadelphia.
- Wrigley's—The Thos. Wrigley Co., Chicago, Ill.

**BOLTS, TRACK.**

- ◆ American Bolt Co., Birmingham, Ala.
- ◆ Ames, W., & Co., Jersey City, N. J.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Bourne-Fuller Co., The, Cleveland, O.
- ◆ Continental Bolt & Iron Works, Chicago, Ill.
- ◆ Graham Nut Co., Pittsburgh, Pa.
- ◆ Illinois Steel Co., Chicago, Ill.
- ◆ Inland Steel Co., Chicago, Ill.
- ◆ Judson Mfg. Co., San Francisco, Calif.
- ◆ Lackawanna Steel Co., Lackawanna, N. Y.
- ◆ Lake Erie Iron Co., Cleveland, O.
- ◆ Lamson & Sessions Co., The, Cleveland, O.
- ◆ Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- ◆ Michigan Bolt & Nut Works, Detroit, Mich.
- ◆ Moran Bolt & Nut Mfg. Co., St. Louis, Mo.
- ◆ National Bolt & Nut Co., Pittsburgh, Pa.
- ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.
- ◆ Scranton Bolt & Nut Co., Scranton, Pa.
- ◆ St. Louis Screw Co., St. Louis, Mo.

**BONDS, RAIL.**

- ◆ American Steel & Wire Co., Chicago, Ill.
- ◆ Duplex Metals Co., Chester, Pa.
- ◆ Eureka Tempered Copper Works, North East, Pa.
- ◆ General Electric Co., Schenectady, N. Y.
- ◆ General Railway Signal Co., Rochester, N. Y.
- ◆ Hall Signal Co., New York, N. Y.
- ◆ Indiana Steel & Wire Co., Muncie, Ind.
- ◆ Interlocking Nut & Bolt Co., Pittsburgh, Pa.
- ◆ Morgan Spring Co., Worcester, Mass.
- ◆ Ohio Brass Co., Mansfield, O.
- ◆ Protected Rail Bond Co., Philadelphia, Pa.
- ◆ Roebbling's, J. A., Sons Co., Trenton, N. J.
- ◆ Standard Underground Cable Co., Pittsburgh, Pa.
- ◆ Union Switch & Signal Co., Swissvale, Pa.

**BONNETS, VALVE.**

- Defiance—Defiance Packless Valve Co., Chicago, Ill.
- O'Meara's Pat.—J. O'Meara, Inc., New York.
- Universal Non-Packing—Universal Valve Co., Chicago, Ill.

**BOOKS, METER READING.**

- Buffalo Meter Co., Buffalo, N. Y.
- Mueller Mfg. Co., H., Decatur, Ill.
- Pittsburg Meter Co., East Pittsburg, Pa.

**BOOMS, LOADING.**

- Link-Belt Company, Chicago, Ill.
- Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.

**BOOSTERS, GAS AND AIR PRESSURE.**

- American Gas Furnace Co., Elizabeth, N. J.
- Connersville Blower Co., Connersville, Ind.
- Improved Appliance Co., Brooklyn, N. Y.
- Roots, P. H., & F. M., Co., Connersville, Ind.
- Watson-Stilman Co., New York, N. Y.

**BOOTS, ELEVATOR.**

- Bailey-Burruss Mfg. Co., Atlanta, Ga.
- Caldwell, H. W., & Son Co., Chicago, Ill.
- Chain Belt Co., Milwaukee, Wis.
- ◆ Dodge Mfg. Co., Mishawaka, Ind.

♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Meese & Gottfried Co., San Francisco, Cal.  
Nurdyke & Marmon Co., Indianapolis, Ind.  
Wolf Co., The, Chambersburg, Pa.

#### BOOTS, RUBBER.

Goodall Rubber Co., Inc., Philadelphia, Pa.  
♦ Hayward, S. F., & Co., New York, N. Y.  
"7" League—Mulconroy Co., Inc., Philadelphia, Pa.

#### BORERS, BUNGHOLE.

Elmes, Charles F., Engineering Works, Chicago, Ill.

#### BORERS, CAR WHEEL.

Betts Machine Co., Inc., Rochester, N. Y.

#### BORERS, STUMP.

Witte—Witte Engine Works, Kansas City, Mo.

#### BORERS, TAP.

Bernz Co., Otto, Newark, N. J.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.  
National Tool Co., Brooklyn, N. Y.  
W. C. Carver—Carver Tool Works, Spring Valley, N. Y.

#### BOSSES, WATER.

Munroe, R., & Sons, Mfg. Corp., Pittsburg, Pa.  
Treadwell Construction Co., Midland, Pa.

#### BOWLS, LADLE.

Columbiana Boiler Co., The, Columbiana, O.

#### BOWLS, WATER CLOSET.

(See also "Earthenware, Sanitary," and "Water Closet Combinations.")

Abingdon Sanitary Mfg. Co., The, Abingdon, Ill.  
American Sanitary Works, New York, N. Y.  
American Valve & Tank Co., Fairmont, W. Va.  
Apex—Apex Supply Co., Trenton, N. J.  
Ariston—Thos. Maddocks Sons Co., Trenton, N. J.  
Atlanta, Atlas, Minerva—Potomac Pottery Co., Keyser, W. Va.  
B. O. T.—B. O. T. Mfg. Co., Trenton, N. J.  
Bradlin—Resolute Pottery Co., Trenton, N. J.  
Capoco—Camden Pottery Co., Camden, N. J.  
Cochran, Dragan & Co., Trenton, N. J.  
Eljer Co., Cameron, W. Va. Trade names—Andes, Andes X, Armory, Claridge, Cleveland, Colfax, Educator, Ford Hospital, Illinois, Maximus, Michigan City, Erie, Newark, Randall, Riverside, Sherman, Toronto.  
Expulso—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Florentine Pottery Co., The, Cambridge, O.  
Hushed-Colfax—Eljer Co., Cameron, W. Va.  
Impervio—The Trenton Potteries Co., Trenton, N. J.  
Ironsides Pottery Co., Bordentown, N. J.  
Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
Keystone Pottery Co., Trenton, N. J.  
Kohler Co., Kohler, Wis.  
Kokomo Sanitary Pottery Co., Kokomo, Ind.  
Lampoco—Lambertville Pottery Co., Lambertville, N. J.  
Maddock's Sons Co., Thomas, Trenton, N. J.  
Mor-Seal—Chicago Pottery Co., Chicago, Ill.  
National Sanitary Co., The, Salem, O.  
New Jersey China Pottery Co., Trenton, N. J.  
Non Overflow—Lambertville Pottery Co., Lambertville, N. J.  
Pacific—Pacific Porcelain Ware Co., San Francisco, Cal.  
Peerless Selling Co., Evansville, Ind.  
Penn Pottery Co., Philadelphia, Pa.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Standard Sanitary Pottery Co., Elizabeth, N. J.  
Two Fired—Trenton Potteries Co., Trenton, N. J.  
Unicast—Universal Sanitary Mfg. Co., New Castle, Pa.  
Union Sanitary Works, Noblesville, Ind.  
Universal—Universal Sanitary Mfg. Co., New Castle, Pa.  
Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
Wooster Sanitary Co., Clarksburg, W. Va.  
Zwermann—Zwermann Company, Robinson, Ill.

#### BOWLS, WATER CLOSET, ENAMELED IRON.

Kohler Co., Sheboygan, Wis.  
Rundle Mfg. Co., Milwaukee, Wis.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.

#### BOX STRAPPING.

Acme Steel Goods Co., Chicago, Ill.  
American Steel & Wire Co., Chicago, Ill.  
Better Box Strapping—Twisted Wire & Steel Co., New York, N. Y.  
De Haven Mfg. Co., Brooklyn, N. Y.  
Grammes, L. F., & Sons, Allentown, Pa.  
Independent Metal Strap Co., New York, N. Y.

Roebbling's, John A., Sons Co., Trenton, N. J.  
Stanley Works, New Britain, Conn.  
Universal—Cary Manufacturing Co., Brooklyn, N. Y.

#### BOXES, ANNEALING.

Blaw—Blaw-Knox Co., Pittsburg, Pa.  
Canton Boiler & Eng. Co., Canton, O.  
Columbiana Boiler Co., The, Columbiana, Ohio.  
Garwood Bronze & Iron Works, Garwood, N. J.  
Leetonia Boiler Co., Leetonia, O.  
McNeil, James & Bro. Co., Pittsburgh, Pa.  
Mesta—Mesta Machine Co., Pittsburg, Pa.  
Mullins Body Corp., Stamping Dept. A., Salem, O.  
Ohio Mfg. Co., The, Painesville, O.  
Petroleum Iron Works Co., The, Sharon, Pa.  
Scaife, Wm. E., & Sons Co., Pittsburg, Pa.  
United Engineering & Foundry Co., Pittsburg, Pa.  
Vandergrift—Millard F. Wilfong Iron Works Co., Philadelphia, Pa.  
Warren City Tank & Boiler Co., Warren, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

#### BOXES AND BOWLS FOR BRAZING.

Dixon Crucible Co., Joseph, Jersey City, N. J.

#### BOXES, CARBONIZING.

Garwood—Garwood Bronze & Iron Works, Garwood, N. J.

#### BOXES, CHARGING.

Columbiana Boiler Co., The, Columbiana, O.

#### BOXES, CLAMP.

♦ Standard Pressed Steel Co., Philadelphia, Pa.

#### BOXES, DRIP.

Clow, James B., & Sons, Chicago, Ill.

#### BOXES, FARRIERS' TOOL.

Noyes, B. B., Co., Inc., Greenfield, Mass.

#### BOXES, GARBAGE, CONCRETE.

Wesely—Wesely Co., Chas., Chicago, Ill.

#### BOXES, GAS DRIP, CAST IRON.

American Foundry & Mfg. Co., St. Louis, Mo.  
Sanitary Company of America, Linfield, Pa.

#### BOXES, GALVANIZING.

Munroe & Sons Mfg. Corp., R., Pittsburg, Pa.  
Petroleum Iron Works Co., The, Sharon, Pa.  
Warren City Tank & Boiler Co., Warren, O.  
Wilfong, W. F., Iron Works Co., Philadelphia, Pa.

#### BOXES, GREASE, PLUMBERS'.

Bernz Co., Otto, Newark, N. J.  
Boekel & Co., Wm., Philadelphia, Pa.  
Johnson, Wm., Newark, N. J.  
Wolff's—Wolff Mfg. Co., Chicago, Ill.  
Woodward-Wanger Co., Philadelphia, Pa.

#### BOXES AND BARRELS, HARD FIBRE, MILL AND FACTORY.

Armstrong Truck Co., North Wales, Pa.  
Kennebrink Mfg. Co., Milton, N. H.  
Rogers Fibre Co., Boston, Mass.  
Standard Fibre Co., Somerville, Mass.  
Vul-Cot—American Vulcanizing Fibre Co., Wilmington, Del.

#### BOXES, JOURNAL.

(See "Bearings, Journal.")

Hanson Clutch & Machinery Co., Tiffin, O.  
Medart Patent Pulley Co., St. Louis, Mo.  
St. Louis Malleable Casting Co., St. Louis, Mo.  
♦ Woods, T. B., Sons Co., Chambersburg, Pa.

#### BOXES, METER.

AFCO—Anniston Foundry Co., Anniston, Ala.  
Aurora Steel Products Co., Aurora, Ill.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Chicago—Illinois Malleable Iron Co., Chicago, Ill.  
Clark Meter Box—H. W. Clark Co., Mattoon, Ill.  
Clarksville Foundry & Machine Wks., Clarksville, Tenn.  
Columbian—Columbian Iron Works, Chattanooga, Ga.  
Crane Co., Chicago, Ill.  
Ford Meter Box Co., Wabash, Ind.  
Glenn Mfg. Co., St. Charles, Ill.  
Hart & Hutchinson Co., New Britain, Conn.  
Jersey—S. E. T. Valve & Hydrant Co., New York, N. Y.  
(water).  
Lynchburg Foundry Co., Lynchburg, Va.  
Macomb Sewer Pipe Co., Macomb, Ill.  
National—American Foundry & Mfg. Co., St. Louis.  
Seavey—Smith & Hemenway Co., New York, N. Y.

Standard Foundry Co., Anniston, Ala.  
Wolff Mfg. Co., Chicago, Ill.

**BOXES, MITRE.**

Goodell—Braunsdorf-Mueller Co., Elizabeth, N. J.  
Goodell-Pratt Co., Greenfield, Mass.  
Jennings, C. E., & Co., New York, N. Y.  
Kawalle—Manumotors Co., Manitowoc, Wis.  
Langdon, Rogers, Star—Millers Falls Co., New York.  
Merritt Hydraulics Co., Philadelphia, Pa.  
Olmsted's—L. H. Olmsted Mfg. Co., New York, N. Y.  
Rockford Mitre Box Co., Rockford, Ill.  
Seavey—Smith & Hemenway Co., New York, N. Y.  
♦ Stanley Rule & Level Co., New Britain, Conn.  
Stearns & Co., E. C., Syracuse, N. Y.  
Union Hardware Co., Torrington, Conn.  
Victor—J. C. McCarty & Co., New York, N. Y.

**BOXES, MOTOR, STEEL.**

Empire Metal Tank Works, East Rochester, N. Y.

**BOXES, OILY WASTE.**

Bethlehem Fdy. & Mach. Co., So. Bethlehem, Pa.  
Cresson Co., Geo. V., Philadelphia, Pa.  
Hall's—Hall Mfg. Co., New York, N. Y.  
Koven & Bro., L. O., New York, N. Y.  
Lyon Metallic Mfg. Co., Aurora, Ill.

**BOXES, PATCH, FOR CONCRETE CONSTRUCTION.**

Biehl Iron Works, Inc., Reading, Pa.

**BOXES, POST.**

(See also "Machinery, Power Transmission.")

**BOXES, PROOFING.**

Meek Oven Mfg. Co., Newburyport, Mass.

**BOXES, RECEIVING AND MANIFOLD, FOR REFINERIES.**

Reid, Joseph, Gas Engine Co., Oil City, Pa.

**BOXES, ROADWAY.**

Casey-Hedges Co., The, Chattanooga, Tenn.  
Clark, H. W., Co., Mattoon, Ill.  
Glenn Mfg. Co., St. Charles, Ill.  
Hammond-Byrd Iron Co., Birmingham, Ala.  
Illinois Malleable Iron Co., Chicago, Ill.  
Mueller Mfg. Co., H., Decatur, Ill.  
National—American Foundry & Mfg. Co., St. Louis, Mo.  
Phoenix—The Central Foundry Co., New York.  
Sanitary Company of America, Linfield, Pa.  
Standard Foundry Co., Anniston, Ala.  
Taylor, W. P., Co., Buffalo, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.  
Western Oil Pump & Tank Co., St. Louis, Mo.

**BOXES, SERVICE OR CURB.**

AFCO—Anniston Foundry Co., Anniston, Ala.  
Alabama—Alabama Pipe & Foundry Co., Anniston, Ala.  
American Foundry & Mfg. Co., St. Louis, Mo. (leak cover).  
American Foundry & Pipe Co., Penn Station, Pa.  
Aurora Steel Products Co., Aurora, Ill.  
Beggs Pipe & Foundry Co., Birmingham, Ala.  
Bignall—Modern Iron Works, Quincy, Ill.  
Buffalo Meter Co., Buffalo, N. Y.  
Buffalo—Modern Iron Works, Quincy, Ill.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Central Foundry Co., The, New York, N. Y.  
Chapman's—J. B. Hauer, Brooklyn, N. Y.  
City Gas—American Foundry & Mfg. Co., St. Louis, Mo.  
Clark—H. W. Clark Co., Mattoon, Ill.  
Columbian—Columbian Iron Works, Chattanooga, Ga.  
Crane Co., Chicago, Ill.  
Divekey Bros. Mfg. Co., Aurora, Ill.  
Eastwood Wire Mfg. Co., Belleville, N. J.  
Eclipse—John C. Kupferle Foundry Co., St. Louis.  
Erie—American Foundry & Mfg. Co., St. Louis, Mo.  
Fleck Bros. Co., Philadelphia, Pa.  
Gadsden Pipe Co., Gadsden, Ala.  
Glenn Mfg. Co., St. Charles, Ill.  
Globe Foundry Co., Port Chester, N. Y.  
Gray Iron Foundry Co., Reading, Pa.  
Guilderland Foundry Co., Guilderland, N. Y.  
Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Hammond-Bvrd Iron Co., Birmingham, Ala.  
♦ Hays Mfg. Co., Erie, Pa.  
Humphries Mfg. Co., The, Mansfield, O.  
Illinois Malleable Iron Co., Chicago, Ill.  
Johnson—J. D. Johnson Co., Philadelphia, Pa.  
McCambridge Co., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
M. I. W.—Modern Iron Works, Quincy, Ill.  
Mott Iron Works, The J. L., Trenton, N. J.  
Mueller Mfg. Co., H., Decatur, Ill.  
Murdock—Murdock Mfg. & Sup. Co., Cincinnati, O.

National Buffalo—American Foundry & Mfg. Co., St. Louis, Mo.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Noark—Johns-Manville, Incorporated, New York, N. Y.  
No-Bolt—Sanitary Company of America, Linfield, Pa.  
North Star Foundry Co., Minneapolis, Minn.  
Orient—Crane Co., Chicago, Ill.  
Paradine Mfg. Co., Erie, Pa.  
Peerless—Modern Iron Works, Quincy, Ill.  
Perfect—S. E. T. Valve & Hydrant Co., New York.  
Phoenix—Central Foundry Co., New York, N. Y.  
Quin-See—Modern Iron Works, Quincy, Ill.  
Ricketts—Richter & Co., Cincinnati, O.  
Sanitary Company of America, Linfield, Pa.  
Standard Foundry Co., Anniston, Ala.  
Storch & Scheid, Philadelphia, Pa.  
Taylor Co., W. P., Buffalo, N. Y.  
Union Foundry Co., Anniston, Ala.  
Wolff Mfg. Co., Chicago, Ill.

**BOXES, SHOP, STEEL, STATIONARY.**

♦ Champion—Western Tool & Mfg. Co., Springfield, O.  
Hart & Hutchinson Co., New Britain, Conn.

**BOXES, SHOP OR TOTE.**

Aurora Steel Products Co., Aurora, Ill.  
Avery Stamping Co., Cleveland, O.  
Barshal Co., The, Cleveland, O.  
Bennett Mfg. Co., Alden, N. Y.  
Canton Art Metal Co., Canton, Ohio.  
Cleveland Wire Spring Co., The, Cleveland, O.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Estes, E. B., & Sons, New York, N. Y.  
Gem Mfg. Co., Boston, Mass.  
Globe Mach. & Stamping Co., Cleveland, O.  
Iron Horse—Rochester Can Co., Rochester, N. Y.  
Kirk & Blum Mfg. Co., Cincinnati, O.  
Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
Merritt Hydraulic Co., Philadelphia, Pa.  
Mullins Body Corp., Stamping Dept. A., Salem, O.  
New Britain Machine Co., New Britain, Conn.  
Ohio Mfg. Co., The, Painesville, O.  
Scalfe, Wm. B., & Sons Co., Pittsburg, Pa.  
Sterling Wheelbarrow Co., West Allis, Wis.  
Terrell's Equipment Co., Grand Rapids, Mich.  
Turner, Vaughan & Taylor Co., Cuyahoga Falls, O.  
Walters Mfg. Co., Pittsburgh, Pa.

**BOXES, STEEL SHELF.**

Aurora Steel Products Co., Aurora, Ill.  
Bernstein Mfg. Co., Philadelphia, Pa.  
Cleveland Wire Spring Co., Cleveland, O.  
Cutter, George, Co., South Bend, Ind.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Mullins Body Corp., Stamping Dept. A., Salem, O.  
♦ Western Tool & Mfg. Co., Springfield, O.

**BOXES, STREET WASHER.**

Chapman's—J. B. Hauer, Brooklyn, N. Y.  
Essex Foundry, Newark, N. J.  
♦ Hays Mfg. Co., Erie, Pa.  
♦ M. Pattern—Illinois Malleable Iron Co., Chicago, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Midland Brass Works, Inc., The, Fort Worth, Texas.  
Mott Iron Works, The J. L., Trenton, N. J.  
National Buffalo—American Foundry & Mfg. Co., St. Louis, Mo.  
Salem Brass & Iron Mfg. Co., Salem, N. J.

**BOXES, STUFFING.**

Buckeye Iron & Brass Works, Dayton, O.  
Crane Co., Chicago, Ill.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
♦ Kelly & Jones Co., Greensburg, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Midland Brass Works, Inc., Fort Worth, Texas.  
Norris, W. C., Tulsa, Okla. (oil well).  
N. T. C., National—National Tube Co., Pittsburgh, Pa.  
Union Machine Co., St. Paul, Minn.  
Wilcox, Crittenden & Co., Middletown, Conn.

**BOXES, TAKE UP.**

(See also "Machinery, Power Transmission.")

♦ Dodge Mfg. Co., Mishawaka, Ind.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
♦ Medart Patent Pulley Co., St. Louis, Mo.  
Meese & Gottfried Co., San Francisco, Cal.  
♦ Nordyke & Marmon Co., Indianapolis, Ind.  
Rex—Chain Belt Co., Milwaukee, Wis.  
♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

**BOXES, TOOL, ENGINEERS' KIT.**

Mullins Body Corp., Stamping Dept. A., Salem, O.

**BOXES, TOOL, FIREPROOF.**

Aurora Steel Products Co., Aurora, Ill.  
 Canton Art Metal Co., The, Canton, O.  
 Johnson Mfg. Co., Urbana, O.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Mullins Body Corp., Stamping Dept. A., Salem, O.  
 Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.

**BOXES, VALVE.**

AFCO—Anniston Foundry Co., Anniston, Ala.  
 American Foundry & Pipe Co., Penn Station, Pa.  
 Bourbon—The Bourbon Copper & Brass Works, Cincinnati, O.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Central Foundry Co., New York, N. Y.  
 Clark—H. W. Clark Co., Mattoon, Ill.  
 Columbian Iron Works, Chattanooga, Tenn.  
 Crane Co., Chicago, Ill.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Drummond & Co., M. J., New York, N. Y.  
 Eddy Valve Co., Waterford, N. Y.  
 Fairbanks—The Pratt & Cady Co., Inc., Hartford, Conn.  
 Flower—Stephens Mfg. Co., Detroit, Mich.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hammond-Byrd Iron Co., Birmingham, Ala.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Iowa Mfg. Co., Oskaloosa, Ia.  
 Lynchburg Foundry Co., Lynchburg, Va.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 National Buffalo—American Foundry & Mfg. Co., St. Louis, Mo.  
 Peerless, Quinn, See, Buffalo—Modern Iron Works, Quincy, Ill.  
 Phoenix—The Central Foundry Co., New York.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y.  
 Sanitary Company of America, Linfield, Mass.  
 Standard Foundry Co., Anniston, Ala.  
 Taylor Co., W. P., Buffalo, N. Y.  
 Union Metal Works, Chelsea, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wood & Co., R. D., Philadelphia, Pa.

**BOXES, VENT, CAST IRON.**

B. & M.—B. & M. Vent Co., The, Philadelphia, Pa.  
 Capitol—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 McCambridge Co., Philadelphia, Pa.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Rudolph—Alfred J. Rudolph, Philadelphia, Pa.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary Company of America, Linfield, Pa.  
 Storch & Scheid, Philadelphia, Pa.

**BOXES, WALL VENTILATING.**

Shipp, C. C., & Co., Indianapolis, Ind.

**BRACES, BIT.**

♦ Atkins—E. C., Atkins Co., Indianapolis, Ind.  
 B. B.—Bergman Tool Mfg. Co., Buffalo, N. Y. (plain and right angle boring).  
 Fray & Co., John S., Bridgeport, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Irvington Mfg. Co., Irvington, N. J. (plain, ratchet, drill, angular, corner).  
 Millers Falls Co., New York, N. Y.  
 Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Pioneer—The Southington Mfg. Co., Southington, Conn.  
 ♦ Stanley Rule & Level Co., New Britain, Conn.  
 Turner & Deegan, Bristol, Conn.  
 Vaughn & Bushnell Mfg. Co., Chicago, Ill.

**BRACES, BIT, PUSH.**

Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

**BRACES, BOILER.**

♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
 Houston—Lukens Steel Co., Coatesville, Pa.  
 Scully Weldless—Scully Steel & Iron Co., Chicago, Ill.

**BRACES, FLOOR CIRCLE, OIL WELL.**

Dunn—Dunn Mfg. Co., Oxnard, Calif.

**BRACES, SEWER OR TRENCH.**

♦ Alliance—Duff Mfg. Co., Pittsburgh, Pa.  
 ♦ Dunn—Duff Mfg. Co., Pittsburgh, Pa.  
 Kalamazoo Foundry & Machine Co., Kalamazoo, Mich.  
 Martin—Martin, Fort Wayne, Ind.  
 Safety Extensible—Waldo Bros. & Bond Co., Boston, Mass.

**BRACKETS, CLOSET TANK.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.

Berger's—Berger Specialty Mfg. Co., Inc., Richmond, Va.  
 Bradley Metal Clasp—The Atlas Mfg. Co., New Haven, Conn.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Crane Co., Chicago, Ill.  
 Dunstane Brass Mfg. Co., Concord, N. H.  
 Federal-Huber Co., Chicago, Ill.  
 Griffin Mfg. Co., The, Erie, Pa.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Richmond Fdy. & Mfg. Co., Richmond, Va.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Street & Kent Mfg. Co., Chicago, Ill.

**BRACKETS (WOODEN), DRAIN BOARD**

Richmond Fdy. & Mfg. Co., Richmond, Va.

**BRACKETS, EXPANSION TANK.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Capitol, Triton—U. S. Radiator Corp., Detroit, Mich.  
 Cenco—C. Erwin Norman & Co., Chicago, Ill.  
 Crane Co., Chicago, Ill.  
 Quickset—F. A. Tyler, Albany, N. Y.  
 Sure Grip—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.

**BRACKETS, FOOT AND HAND RAIL.**

American Fdy. & Mfg. Co., St. Louis, Mo.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Newman Mfg. Co., The, Cincinnati, O.  
 Russell & Irwin Mfg. Co., New York, N. Y.

**BRACKETS, GAS AND ELECTRIC LIGHT FIXTURE.**  
(See also "Fixtures, Gas and Electric.")

♦ Detroit Valve & Fitting and Detroit Brass Works, Detroit, Mich.  
 Frank Bros., New York, N. Y.  
 Newman Mfg. Co., The, Cincinnati, O.  
 Utica Valve and Fixture Co., Utica, N. Y.  
 Williamson, R., Co., Chicago, Ill.  
 Wire Goods Co., The, Worcester, Mass.

**BRACKETS, LAMP, UNIVERSAL.**

♦ Searchlight—McCroskey Tool Corp., Meadville, Pa.

**BRACKETS, LAVATORY, BRASS AND NICKEL PLATED.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Crane Co., Chicago, Ill.  
 Dunstane Brass Mfg. Co., Concord, N. H.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Griffin's—The Griffin Mfg. Co., Erie, Pa.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Jenkins Mfg. Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kupferle Foundry Co., John C., St. Louis, Mo.  
 McCambridge Co., Philadelphia, Pa.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 New Jersey Tube Co., New York.  
 Newman Mfg. Co., The, Cincinnati, O.  
 ♦ Parker, Chas., Co., The, Meriden, Conn.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Union Foundry Co., Anniston, Ala.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolff Mfg. Co., Chicago, Ill.

**BRACKETS OR HANGERS, LAVATORY, CAST IRON.**

American Brass & Copper Co., The, New York, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Barber Mfg. Co., The, Ashtabula, O.  
 Crane Co., Chicago, Ill.  
 Douglas Co., The, John, Cincinnati, O.  
 Em-Bas—The Meyer-Sniffen Co., New York, N. Y.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Humphries Mfg. Co., The, Mansfield, O.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kupferle Foundry Co., John C., St. Louis, Mo.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Modern Iron Works, Quincy, Ill.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sargent & Co., New Haven, Conn.  
 Wolff Mfg. Co., L., Chicago, Ill.

**BRACKETS AND SUPPORTS, PIPE.**

Crane—Crane Co., Chicago, Ill.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 G. G.—Geo. Gross, Rockaway Beach, L. I.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

Lisk, Joseph P., Brooklyn, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 National Tube Co., Pittsburgh, Pa.  
 Simmons Co., John, New York, N. Y.  
 Tyler Underground Heating System, Pittsburgh, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**BRACKETS, RADIATOR.**

Capitol, Triton—U. S. Radiator Corp., Detroit, Mich.  
 J. R. S.—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.  
 Smith, H. B., Co., The, Westfield, Mass.

**BRACKETS, RANGE BOILER.**

(See also "Stands, Range Boiler.")

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Saw & Tool Works, Chicago, Ill.  
 F. A. T.—F. A. Tyler, Albany, N. Y.  
 J. R. S.—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.  
 Quick-Set—Frederick A. Tyler, Albany, N. Y.

**BRACKETS, ROOFING.**

Neville—Neville Mfg. Co., Kewanee, Ill.

**BRACKETS, SCAFFOLDING.**

Ashland Folding Scaffold Co., Ashland, O.  
 Berlin Construction Co., Berlin, Conn.  
 Folding Scaffold Bracket Co., Detroit, Mich.  
 Hayes—Folding Scaffold Bracket Co., Detroit, Mich.  
 Longlife—Plymouth Metal Products Co., Plymouth, Wis.  
 Moulton & Co., C. W., Somerville, Mass.  
 Richards-Wilcox Mfg. Co., Evansville, Ind.  
 Steel Scaffolding Co., Evansville, Ind.  
 Taylor Mfg. Co., James L., Bloomfield, N. J.  
 Weber Mfg. Co., West Allis, Wis.

**BRACKETS, SHELF.**

American Ring Co., Waterbury, Conn. (glass shelf).  
 Arcade Mfg. Co., Freeport, Ill.  
 Atlas—Manhattan Screw & Stamping Works, New York.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Omaha—The Galard Co., New York, N. Y.  
 ♦ Peck, Stow & Wilcox Co., New York, N. Y.  
 Quickset—F. A. Tyler, Albany, N. Y.  
 Reading Hardware Co., Reading, Pa.  
 Russell, John M., Mfg. Co., Inc., The, Naugatuck, Conn.  
 Russell & Irwin Mfg. Co., New York, N. Y.  
 Stanley Works, New Britain, Conn.  
 Welch, T. F., & Co., Boston, Mass.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**BRACKETS, SINK.**

Agricola Pipe Co., Gadsden, Ala.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.  
 American Scale Co., Kansas City, Mo.  
 Ashtabula—Barber Mfg. Co., The, Ashtabula, O.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Berger Peerless—Berger Specialty Mfg. Co., Inc., Richmond, Va.  
 Bignall Co., The, Medina, N. Y.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Clarksville Foundry & Machine Works, Clarksville, Tenn.  
 Connor, M. A., Lockport, N. Y.  
 Dempster Mill Mfg. Co., Beatrice, Neb.  
 Divekey Bros. Mfg. Co., Aurora, Ill.  
 Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.  
 Eclipse—Flagg & Co., Stanley G., Philadelphia, Pa.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Gray Iron Foundry Co., Reading, Pa.  
 Griffin's—The Griffin Mfg. Co., Erie, Pa.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Hammond-Byrd Iron Co., Birmingham, Ala.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Johnson—J. D. Johnson Co., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Korn—Korn Mfg. Co., Lansing, Mich.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Miller Foundry & Specialty Co., No. Tonawanda, N. Y.  
 M. I. W.—Modern Iron Works, Quincy, Ill.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Olyphant Foundry Co., Olyphant, Pa.  
 Ottumwa Moline Engine & Pump Co., Ottumwa, Ia.  
 Park & McKay Co., Detroit, Mich.  
 Rabe Pipe & Foundry Co., Inc., The, Chattanooga, Tenn.  
 Richmond Fdy. & Mfg. Co., The, Richmond, Va.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary—Jordan & Steele Mfg. Co., The, Hastings, Mich.

Sanitary Company of America, Linfield, Pa.  
 Smith & Co., J. R., Mechanicsville, N. Y.  
 Smith-Matthews Foundry Co., Detroit, Mich.  
 Standard Foundry Co., Anniston, Ala.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Swett Iron Works, A. L., Medina, N. Y.  
 Treaty Co., The, Greenville, O.  
 Vollrath Co., The, Sheboygan, Wis.  
 Wessels—D. D. Wessels & Son, Detroit, Mich.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Wolverine Fdy. Co., Detroit, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Zura Mfg. Co.

**BRACKETS, SINK, ADJUSTABLE.**

Agricola Pipe Co., Gadsden, Ala.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Boston—Joseph H. Young Co., Boston, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Korn—Korn Mfg. Co., Lansing, Mich.  
 McDonald, A. Y., Mfg. Co., Dubuque, Ia.  
 Miller Foundry & Specialty Co., No. Tonawanda, N. Y.

**BRACKETS, SINK PUMP.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Dickson Co., The, Peoria, Ill.  
 McDonald, A. Y., Mfg. Co., Dubuque, Ia.

**BRACKETS, SINK, STEEL.**

Berger's—B. A. Berger Mfg. Co., Richmond, Va.  
 Dunstane Bros. Mfg. Co., Concord, N. H.  
 Korn—Korn Mfg. Co., Lansing, Mich.  
 Phoenix Hardware Mfg. Co., Homer, N. Y.  
 Wise, J. B., Watertown, N. Y.

**BRACKETS, WALL, POWER TRANSMISSION.**

(See also "Mach'y," "Power.")

♦ Dodge Mfg. Co., Mishawaka, Ind.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 ♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Naylor Bros., Peekskill, N. Y.  
 ♦ Pioneer—Standard Pressed Steel Co., Philadelphia, Pa.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Sprout, Waldron & Co., Muncy, Pa.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

**BRAKES, CORNICE.**

Robinson, J. M. Mfg. Co., Cincinnati, Ohio.

**BRAKES, FACTORY TRUCK.**

Safety—Safety Truck Brake Co., Appleton, Wis.

**BRAKES, FRICTION LININGS.**

Dominion, Graphite—Dominion Asbestos and Rubber Corp., New York.

**BRAKES, HAND.**

Ohl—Geo. A. Ohl & Co., Newark, N. J.

**BRAKES, POWER.**

Poorman—Streine Tool & Mfg. Co., New Bremen, O.

**BRANDS, BURNING, SOLID COPPER.**

Knight, H. W., & Son, Seneca Falls, N. Y.  
 Markwell—Henry Moss & Co., Inc., New York.  
 Matthews & Co., Jas. H., Pittsburgh, Pa.

**BRASS CASTINGS AND SPECIALTIES.**

Flannery, P. J., Co., New Britain, Conn.

**BRASS FINISHERS' LATHES.**

(See also "Lathes, Brass Finishers'.")

American Tool & Machine Co., Boston, Mass.

**BRASS GOODS, GAS.**

(See "Cocks, Gas," "Valves," etc.)

**BRASS GOODS, PLUMBING.**

(See "Cocks," "Fittings," "Valves," etc.)

**BRASS GOODS, SPECIAL, TO ORDER.**

Exeter Brass Works, Exeter, N. H.  
 Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Keystone Brass Works, Erie, Pa.

**BRASS GOODS, STEAM.**

(See "Cocks," "Fittings," "Valves.")



**BRASS GOODS, WATER.**

(See "Cocks," "Fittings," "Valves," etc.)

**BRASS AND BRONZE INGOTS.**

- Ajax Metal Co., The, Philadelphia, Pa.  
 Anchor—Great Smelting & Refining Co., Chicago, Ill.  
 Brewer, C. R., Smelting & Refining Co., Cincinnati, O.  
 Climax—North American Smelting Co., Philadelphia, Pa.  
 Columbia Smelting & Refining Co., New York, N. Y.  
 Connecticut Brass Corp., West Cheshire, Conn.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Hartman Ingot Metal Co., Chicago, Ill.  
 Illinois Smelting & Refining Co., Chicago, Ill.  
 Lehman Bros., Hoboken, N. J.  
 Loewenthal Co., Chicago, Ill.  
 ♦ Michigan Smelting & Refining Co., Detroit, Mich.  
 Riverside Metal Refining Co., Connellsville, Pa.  
 United Smelting & Aluminum Co., New Haven, Conn.  
 Whipple & Choate, Bridgeport, Conn.  
 Wizard—S. Birkenstein & Sons, Inc., Chicago, Ill.

**BRASS RODS, BARS AND SHEETS.**

- Ambrac—American Brass Co., The, Waterbury, Conn.  
 Ayling & Reichert Co., The, Toledo, O.  
 Baltimore Tube Co., Baltimore, Md.  
 Benson, H. K. & F. S., Glen Ridge, N. J.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Bristol Brass Co., Bristol, Conn.  
 Chase Companies, Inc., Waterbury, Conn.  
 Clendenin Bros., Inc., Baltimore, Md.  
 Cleveland Brass & Copper Mills, Inc., Euclid, O.  
 Connecticut Brass & Mfg. Corp., Waterbury, Conn.  
 Dallas Brass & Copper Co., Chicago, Ill.  
 Delaware Steel Company, New York.  
 Detroit Copper & Brass Rolling Mills, Detroit.  
 Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
 Eagle Smelting & Refining Works, New York, N. Y.  
 Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Michigan Copper & Brass Co., Detroit, Mich.  
 National Brass & Copper Tube Co., New London, Conn.  
 National Conduit & Cable Co., Inc., Hastings-on-Hudson, N. Y.  
 New Jersey Tube Co., New York.  
 North American Copper Co., New York, N. Y.  
 Plume & Atwood Mfg. Co., The, Thomaston, Conn.  
 Randolph-Clowes Co., The, Waterbury, Conn.  
 Riverside Metal Co., Riverside, N. J.  
 Rome Brass & Copper Co., Rome, N. Y.  
 Snow—The Plume & Atwood Mfg. Co., Thomaston, Conn.  
 Stamford Rolling Mills Co., New York.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Wolverine—The Michigan Copper & Brass Co., Detroit, Mich.

**BRASS, WHITE.**

- ♦ Michigan Smelting & Refining Co., Detroit, Mich. (bearing metal).

**BRATTICE CLOTH.**

- Johnston-Morehouse-Dickey Co., Pittsburgh, Pa.  
 Mikesell Brothers Co., Chicago, Ill.  
 Upson-Walton Co., The, Cleveland, C. (Importer).

**BRAKERS.**

(See "Torches, Blow.")

- ♦ Clayton & Lambert Mfg. Co., Detroit, Mich.

**BRAZING OUTFITS.**

- Economy—Economy Welding Machine Co., Kansas City, Mo.  
 Edge, Frank, & Co., Grand Rapids, Mich. (saw).  
 Improved Appliance Co., Brooklyn, N. Y.  
 Vulcan Brazier—Black Diamond Saw & Machine Wks., Natick, Mass.

**BREAKERS AND CUTTERS, ICE.**

- Champion—The Allman Gas Engine & Machine Co., New York, N. Y.  
 Creasey—Gruman Ice Tool Works, Branchville, Conn.  
 Link-Belt Company, Chicago and Philadelphia.  
 Little Giant—B. L. Schmidt Co., Davenport, Iowa.

**BREAKERS, CIRCUIT.**

- Electrite—Sundh Electric Co., Newark, N. J.  
 Roller-Smith—Roller-Smith Co., New York, N. Y.

**BREAKERS, CORE.**

- Ingersoll-Rand Co., New York.

**BREAKERS, VACUUM AND CIRCUIT BREAKER TRIPS.**

- Monarch—Consolidated Engine Stop Co., New York.

**BRECHINGS, BOILER.**

- Drake-Williams-Mount Co., Omaha, Neb.  
 Heine Boiler Co., St. Louis, Mo.  
 Haines Co., The, Chicago, Ill.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Littleford Bros., Cincinnati, O.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Stover Steel Tank Co., Freeport, Ill.  
 Tippet & Wood, Phillipsburg, N. J.  
 Treadwell, M. H. Co., Inc., New York, N. Y.

**BRICKS, ABRASIVE.**

- ♦ Alundum, Crystolon—Norton Co., Worcester, Mass.  
 ♦ American Emery Wheel Works, Providence, R. I.  
 ♦ Borolon Abrasive Co., Bridesburg, Philadelphia, Pa.  
 ♦ Carborundum Co., The, Niagara Falls, N. Y.  
 Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Codd, E. J. Co., Baltimore, Md.  
 Eagle Emery & Corundum Wheel Co., Chicago, Ill.  
 Massasoit—Springfield Grinding Co., Chester, Mass.  
 Star Corundum Wheel Co., Detroit, Mich.  
 Stiles, H. A., & Co., Boston, Mass.  
 Vitrified Wheel Co., Westfield, Mass.

**BRICKS, BAUXITE, ACID PROOF, CHROME, MAGNESITE, SILICA.**

- Harbison Walker Refractories Co., Pittsburg, Pa.  
 Laclede-Christy Clay Products Co., St. Louis, Mo.  
 Winslow & Co., Inc., Portland, Me. (sulphite digester).

**BRICKS, INSULATING.**

- Nonpareil—Armstrong Cork & Insulating Co., Pittsburg, Pa.  
 Sil-O-Cel—Celite Products Co., Chicago, Ill.

**BRIDGES, COAL AND ORE.**

- Robins Conveying Belt Co., New York.

**BROACHES.**

(See also "Machines, Broaches.")

- Broachwell—The Velco Mfg. Co., Inc., Greenfield, Mass.  
 Krasberg Mfg. Co., Chicago, Ill.

**BRONZE, ACID RESISTING.**

- Ampco—American Metal Products Co., Milwaukee, Wis.  
 Gilbert's—Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
 Standard Brass Casting Co., Oakland, Cal.

**BRONZE BARS, CORED AND SOLID.**

- American Bronze Corp., Berwyn, Pa.  
 Atlas—Atlas Brass Foundry Co., The, Columbus, Ohio.  
 Autocrat—United American Metals Corp., Brooklyn, N. Y.  
 Bronze Metal Co., New York, N. Y.  
 Gopher—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Johnson Bronze Co., New Castle, Pa.  
 Machinebronze—Lumen Bearing Co., Buffalo, N. Y.  
 Williams "G"—E. A. Williams & Son, Inc., Jersey City, N. J.

**BRONZE, MANGANESE AND PHOSPHOR.**

- Ajax—The Ajax Metal Co., Philadelphia, Pa.  
 Ambrac—The American Brass Co., Waterbury, Conn.  
 Anchor—Great Western Smelting & Refining Co., Chicago, Ill.  
 Bethlehem Steel Co., South Bethlehem, Pa.  
 Brady Brass Co., Jersey City, N. J.  
 Brass Foundry Co., Peoria, Ill.  
 Columbia Smelting & Refining Co., New York, N. Y.  
 Copperbrite, Goldbrite, Silverbrite—Rath Mfg. Co., Inc., Philadelphia, Pa.  
 Cosmos, Stannum—Lumen Bearing Co., Buffalo, N. Y.  
 Crescent—Crescent Phosphorized Metal Co., The, Philadelphia.  
 Cypress—Brady Brass Co., Jersey City, N. J.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
 Elephant—The Phosphor Bronze Smelting Co., Philadelphia, Pa.



**Fries & Co.**, Buffalo, N. Y.  
**Gilbert's Kosmos**—Gilbert, A., & Sons, Brass Foundry Co., St. Louis, Mo.  
**Ideal**—Ideal Bronze Co., Cleveland, O.  
**Illinois Smelting & Refining Co.**, Chicago, Ill.  
**North American Copper Co.**, New York, N. Y.  
**Omega**—Riverside Metal Co., Riverside, N. J.  
**Perkins, H. K., Co.**, Taunton, Mass.  
**Reeves & Co.**, Paul S., Philadelphia, Pa. (Rod, sheet, wire.)  
**Seymour Mfg. Co.**, The, Seymour, Conn.  
**Sherwood Brass Works**, Detroit, Mich.  
**Standard Brass Casting Co.**, Oakland, Cal.

**BRONZE POWDER AND BRONZING LIQUIDS.**

**Capitol, Triton**—U. S. Radiator Corp., Detroit, Mich.  
**Connors, Wm.**, Paint Mfg. Co., The, Troy, N. Y.  
**Du Pont Chemical Works**, New York, N. Y.  
**Fuchs & Lang Mfg. Co.**, The, Chicago, Ill.  
**Gilbert, A., & Sons, Brass Foundry Co.**, St. Louis, Mo.  
**Goldbrite, Copperbrite, Silverbrite**—Rath Mfg. Co., Inc., Philadelphia, Pa.  
**Ideal**—American Radiator Co., Chicago, Ill.  
**International Smokeless Powder & Chemical Co.**, New York.  
**Norwesco**—Northwestern Chemical Co., The, Marietta, Ohio.  
**King, Walter E.**, Cincinnati, O.  
**Seymour**—Seymour Mfg. Co., The, Seymour, Conn.  
**Tiger**—Atlantic Drier & Varnish Co., Philadelphia.

**BRONZE RODS, BARS AND SHEETS.**

**American Brass Co.**, The, Waterbury, Conn.  
**Bridgeport**—Bridgeport Brass Co., Bridgeport, Conn.  
**Cleveland Brass & Copper Mills, Inc.**, Euclid, O.  
**Dallas Brass & Copper Co.**, Chicago, Ill.  
**Detroit Copper & Brass Rolling Mills**, Detroit, Mich.  
**Eagle Brand**—Taunton-New Bedford Copper Co., Taunton, Mass.  
**Elephant**—Phosphor Bronze Smelting Co., Philadelphia, Pa.  
**Helmet**—Chas H. Besly & Co., Chicago, Ill. (sheet only).  
**New Era**—New Era Mfg. Co., Kalamazoo, Mich.  
**New Jersey Tube Co.**, New York.  
**Plume & Atwood Mfg. Co.**, The, Thomaston, Conn.  
**Randolph-Clowes Co.**, The, Waterbury, Conn.  
**Riverside Metal Co.**, Riverside, N. J.  
**Seymour**—The Seymour Mfg. Co., Seymour, Conn.  
**Stamford Rolling Mills Co.**, New York.  
**Star**—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
**Wolverine**—The Michigan Copper & Brass Co., Detroit, Mich.

**BRONZE, TOBIN.**

**American Brass Co.**, Waterbury, Conn.

**BROOMS AND BRUSHES, FACTORY.**

**Brown, Lewis A., & Co.**, Boston, Mass.  
**Capital**—Indianapolis Brush & Broom Mfg. Co., Indianapolis, Ind.  
**Felton & Son Co.**, S. A., Manchester, N. H.  
**Hamburg Broom Works**, Hamburg, Pa. Trade names—Acme, Pavonia, Peerless, Puritan, Our Best, Eclipse, Uncle Tom.  
**"King Bee"**—Kendallville Broom & Brush Co., Kendallville, Ind.  
**Lay, Victor**—Joseph Lay Co., The, Ridgeville, Ind.  
**Long Island Broom Co.**, Long Island City, N. Y.  
**Merkle Broom Co.**, Paris, Ill.  
**Milwaukee Brush Manufacturing Co.**, Milwaukee, Wis.  
**Mulholland, Wm.**, New York, N. Y.  
**Obermayer Co.**, The S., Cincinnati, O.  
**Osborn Mfg. Co.**, Cleveland, O.  
**Paxson Co.**, J. W., Philadelphia, Pa.  
**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Pollock Brush Co.**, Easton, Pa. (bass and bamboo).  
**Re-Fil-It**—Re-Fil-It Broom Mfg. Co., Boston, Mass.  
**Re-Mov-All**—Worcester Brush & Scraper Co., Worcester, Mass.  
**Smith Fdy. Supply Co.**, J. D., Cleveland, O.  
**Spring Maid**—Sterling Products Co., Inc., Chicago, Ill.  
**Tolman Mfg. Co.**, Milwaukee, Wis.  
**Suffern Broom Co.**, Springfield, Ill.  
**Warner, Wm. E.**, New York, N. Y.

**BROOMS, RAILROAD SWITCH.**

**Indianapolis Brush & Broom Mfg. Co.**, Indianapolis, Ind.  
**Lay, Joseph, Co.**, The, Ridgeville, Ind.  
**Osborn**—Osborn Mfg. Co., The, Cleveland, O.  
**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Royal Worcester**—Worcester Brush & Scraper Co., Worcester, Mass.

**BROOMS, WIRE.**

**Browne, F. W., Co.**, Farmington, N. H.

**Lay, Joseph, Co.**, The, Ridgeville, Ind.  
**Newark Brush & Scraper Co.**, Newark, N. J.  
**Osborn Mfg. Co.**, Cleveland, O.  
**Pilley**—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

**BRUSHES, AUTO, FOUNTAIN.**

**Tempco**—Tempco Mfg. Co., Chicago, Ill.

**BRUSHES, AUTOMOBILE.**

**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.

**BRUSHES, BATH, FOUNTAIN.**

**Knickerbocker**—Knickerbocker Mfg. Co., Chicago, Ill.  
**Monarch**—Van-Woud Rubber Co., Brooklyn, N. Y.  
**Nicholls**—The Liberty Mfg. Co., East Norwalk, Conn.  
**Quaker City Rubber Co.**, Philadelphia, Pa.  
**Sanitax**—Sanitax Brush Co., Chicago, Ill.  
**Smith**—E. C. Smith Mfg. Co., Chicago, Ill.  
**Sternau**—S. Sternau & Co., New York, N. Y.

**BRUSHES, BENCH.**

**Indianapolis Brush & Broom Mfg. Co.**, Indianapolis, Ind.  
**Laco**—A. Latimer & Sons, Detroit, Mich.  
**Milwaukee Brush Manufacturing Co.**, Milwaukee, Wis.  
**Osborn Mfg. Co.**, Cleveland, O.  
**Pollock Brush Co.**, Easton, Pa.

**BRUSHES, BUTCHERS' BLOCK.**

**Goss, Frank A.**, Morristown, N. J.  
**Lay, Joseph, Co.**, The, Ridgeville, Ind.  
**Milwaukee Brush Manufacturing Co.**, Milwaukee, Wis.  
**Monarch**—Worcester Brush & Scraper Co., Worcester, Mass.  
**Osborn**—Osborn Mfg. Co., Inc., The, Cleveland, O.  
**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Royal Worcester (5 in 1)**—Worcester Brush & Scraper Co., Worcester, Mass.  
**Solid Back**—Newark Brush & Scraper Co., Newark, N. J.

**BRUSHES, CASTING.**

**Bracket-Bridled**—Newark Brush & Scraper Co., Newark, N. J.  
**Browne, F. W., Co.**, Farmington, N. H. (wire).  
**Foundry**—Newark Brush & Scraper Co., Newark, N. J.  
**Goss, Frank A.**, Morristown, N. J.  
**Hill & Griffith Co.**, Cincinnati, O.  
**Lay, Joseph, Co.**, The, Ridgeville, Ind.  
**Milwaukee Brush Mfg. Co.**, Milwaukee, Wis.  
**Obermayer & Co.**, S., Cincinnati, O.  
**Osborn**—The Osborn Mfg. Co., Inc., Cleveland, O.  
**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Robertson, Theo. B.**, Products Co., Inc., Chicago, Ill.  
**Safco**—S. A. Felton & Son Co., Manchester, N. H.  
**Shanafelt Mfg. Co.**, Canton, O.  
**Smith Foundry Supply Co.**, J. D., Cleveland, O.  
**Warner, Wm. E.**, New York, N. Y.

**BRUSHES, CLOSET BOWL.**

**Mikesell Brothers Co.**, Chicago, Ill.  
**Pollock Brush Co.**, Easton, Pa.  
**Wolverine Brass Works**, Grand Rapids, Mich.  
**Woodward-Wanger Co.**, Philadelphia, Pa.

**BRUSHES, CONDENSER TUBE.**

**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.

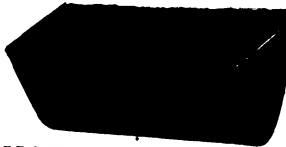
**BRUSHES, DYNAMO AND MOTOR.**

**American Carbon & Battery Works**, East St. Louis, Ill.  
**Crown**—Crown Woven Wire Brush Co., Salem, Mass.  
**Cutler-Hammer Mfg. Co.**, Milwaukee, Wis.  
**Graphalloy**—Graphite Metallizing Corp., Yonkers, N. Y.  
**Graphitoleo**—Dixon Crucible Co., Joseph, Jersey City, N. J.  
**Speer**—Speer Carbon Co., St. Marys, Pa.  
**United States Graphite Co.**, Saginaw, Mich.

**BRUSHES AND CARDS, FILE CLEANING.**

**Delta File Works**, Philadelphia, Pa.  
**Hargrave**—Cincinnati Tool Co., The, Cincinnati, O.  
**Newark**—Newark Brush & Scraper Co., Newark, N. J.  
**Nicholson File Co.**, Providence, R. I.  
**Phoenix**—Phoenix Hardware Co., Buffalo, N. Y.  
**Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Tragle Mfg. Co.**, Inc., Reading, Pa.  
**Watson, L. S., Mfg. Co.**, Leicester, Mass.





**HOWE** Malleable Iron Elevator Buckets  
Highest Grade 90% Charcoal Malleable Iron — Strong, Smooth, Uniform Throughout.  
Buckets Reinforced at Corners to Add Strength and Durability.  
**HOWE CHAIN COMPANY** 104 East Clay Avenue Muskegon, Michigan

**BRUSHES, FLUE.**

(See "Cleaners, Boiler Flue.")

Abbott Wire Brush Co., Boston, Mass.  
Abram, Spiral Coil—Newark Brush & Scraper Co., Newark, N. J.  
Brown, F. W., Co., Farmington, N. H.  
Flint, Warren F., Co., Boston, Mass.  
Freeman—Newark Brush & Scraper Co., Newark, N. J.  
Milwaukee Brush Mfg. Co., Milwaukee, Wis.  
Osborn—The Osborn Mfg. Co., Inc., Cleveland, O.  
Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Re-Mov-All—Worcester Brush & Scraper Co., Worcester, Mass.

**BRUSHES, FURNACE AND HEATER.**

Abbott Wire Brush Co., Boston, Mass.  
Brown, F. W., Co., Farmington, N. H.  
Felco—S. A. Felton & Son Co., Manchester, N. H.  
Goss, Frank A., Morristown, N. J.  
Osborn Mfg. Co., Inc., The, Cleveland, O.  
Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Re-Mov-All—Worcester Brush & Scraper Co., Worcester, Mass.

**BRUSHES, GLUE, FIBRE,**

Shanafelt Mfg. Co., Canton, O.

**BRUSHES, HOSE CLEANING.**

Osborn—The Osborn Mfg. Co., Inc., Cleveland, O.

**BRUSHES, MACHINE.**

Empire Brush Works, Chicago, Ill.  
♦ Indianapolis Brush & Broom Mfg. Co., Indianapolis, Ind.  
Felton & Son Co., S. A., Manchester, N. H.  
Foundry Bracket—Newark Brush & Scraper Co., Newark, N. J.  
Haisler Bros. Co., Chicago, Ill.  
Hill & Griffith Co., The, Cincinnati, O.  
♦ Lay, Joseph, Co., The, Ridgeville, Ind.  
Mason Brush Works, Worcester, Mass.  
Milwaukee Brush Mfg. Co., Milwaukee, Wis.  
Mulholland, Wm., New York, N. Y.  
Munning Co., A. P., Matawan, N. J.  
Obermayer Co., The S., Cincinnati, O.  
Osborn—The Osborn Mfg. Co., Inc., Cleveland, O.  
Turner, J. S., Mfg. Co., Lowell, Mass.  
Warner, Wm. E., New York, N. Y.

**BRUSHES, MINE LAMP CLEANING.**

American Safety Lamp & Mine Supply Co., Scranton, Pa.

**BRUSHES, MOTOR & GENERATOR.**

General Electric Co., Schenectady, N. Y.  
Speer—Speer Carbon Co., St. Marys, Pa.

**BRUSHES, PLUMBERS' WIRE.**

Bernz Co., Otto, Newark, N. J.  
Mound—Mound Tool Co., St. Louis, Mo.  
Osborn Mfg. Co., Inc., Cleveland, O.  
(for joint wiping, etc.).

**BRUSHES, RADIATOR.**

King—King Mfg. Co., Newark, N. J.  
Osborn Mfg. Co., Inc., Cleveland, O.  
Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Pollock Brush Co., Easton, Pa.

**BRUSHES, SCRATCH, CIRCULAR WIRE.**

♦ Economy, Monitor, Osborn—Osborn Mfg. Co., Inc., Cleveland, O.  
Electra-Weld—Herold Bros. Co., The, Cleveland, O.  
Milwaukee Brush Mfg. Co., Milwaukee, Wis.  
♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.

**BRUSHES, STENCIL.**

Garvey—Garvey Fountain Brush & Ink Co., St. Louis, Mo.  
Matthews & Co., Jas. H., Pittsburgh, Pa.

**BRUSHES, TIRE ROUGHENING.**

Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.

**BRUSHES, WIRE.**

Abbott Wire Brush Co., Boston, Mass.  
Brown, F. W., Co., Farmington, N. H.  
Flint, Warren F., Co., Boston, Mass.  
H. & V. W.—Hanson & Van Winkle Co., Newark, N. J.  
Haisler Bros. Co., Chicago, Ill.  
Hill & Griffith Co., Cincinnati, O.  
Lay, Joseph, Co., The, Ridgeville, Ind.  
Mason Brush Works, Worcester, Mass.  
Mulholland, Wm., New York, N. Y.  
Newark Brush & Scraper Co., Newark, N. J.  
Osborn Mfg. Co., Inc., The, Cleveland, Ohio.  
Phoenix Brush & Mfg. Co., Chicago, Ill.  
Quick Kleaner—Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Re-Mov-All—Worcester Brush & Scraper Co., Worcester, Mass.  
Stow Mfg. Co., Binghamton, N. Y.  
Warner, Wm. E., New York, N. Y.  
Worcester Brush & Scraper Co., Worcester, Mass.

**BRUSHES, WIRE, TINNERS.**

Pilely Packing & Flue Brush Mfg. Co., St. Louis, Mo.

**BUCKETS, CLAM SHELL AND ORANGE PEEL.**

Blaw-Knox—Blaw-Knox Co., Pittsburgh, Pa.  
Browning—Victor R. Browning Co., The, Cleveland, O.  
Buffalo Contractor's Plant Corp., Buffalo, N. Y.  
Buffalo Holst & Derrick Co., Buffalo, N. Y.  
Codd Tank & Specialty Co., Baltimore, Md.  
Haiss—Geo. Haiss Mfg. Co., New York, N. Y.  
Hunt, C. W., Co., Inc., New York, N. Y.  
Industrial Works, Bay City, Mich.  
Kiesler—Joseph F. Kiesler Co., Chicago, Ill.  
Lakewood—The Lakewood Engineering Co., Cleveland, Ohio.  
Link-Belt Company, Chicago and Philadelphia.  
McMyler-Interstate Co., Bedford, O.  
National—Phillips, Doup Co., Brooklyn, N. Y.  
Orton & Steinbrenner Co., Chicago, Ill.  
Owen Bucket Co., The, Cleveland, O.  
Rawson—Mead-Morrison Mfg. Co., Boston, Mass.  
Sackett, Chicago—Sackett Screen & Chute Co., Chicago, Ill.  
Shannon—J. Jacob Shannon & Co., Philadelphia, Pa.  
Vulcan Steam Shovel Co., Toledo, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Williams—G. H. Williams Co., The, Erie, Pa.

**BUCKETS, COAL AND ORE.**

Alvey Ferguson Co., The, Louisville, Ky.  
Biehl Iron Works, Inc., The, Reading, Pa.  
Browning, Victor R., Co., Cleveland, O.  
Caldwell & Son Co., H. W., Chicago, Ill.  
Forcht Sons, Geo., Hoboken, N. J.  
Gifford-Wood Co., Hudson, N. Y.  
Hayward, S. F., & Co., New York, N. Y.  
Howe Chain Co., Muskegon, Mich.  
♦ Illinois Malleable Iron Co., Chicago, Ill.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Johnson Mfg. Co., Urbana, Ohio.  
Link-Belt Company, Chicago and Philadelphia.  
Mullins Body Corp., Stamping Dept. A., Salem, O.  
Northern Engineering Works, Detroit, Mich.  
Seafie, Wm. B., & Sons Co., Pittsburgh, Pa.  
Wellman—Seaver-Morgan Co., Cleveland, O.  
Williams, G. H. Co., Cleveland, O.

**BUCKETS, CONCRETE AND MORTAR.**

Archer Iron Works, Chicago, Ill.  
Biehl Iron Works, Inc., The, Reading, Pa.  
Boss—American Cement Machine Co., Inc., Keokuk, Ia.  
Browning Co., The, Cleveland, O.  
Insley Mfg. Co., Indianapolis, Ind.  
Lakewood Engineering Co., Cleveland, O.  
Littleford Bros., Cincinnati, O.  
Sackett, Chicago—Sackett Screen & Chute Co., Chicago, Ill.  
Steel Basket Co., Cedar Rapids, Ia.  
Unionloc—Union Iron Works, Hoboken, N. J.  
(Lockwood patent, automatic.)  
Wall, F., Mfg. Supply Co., The, Pittsburgh, Pa.  
Wheeling Corrugating Co., Wheeling, W. Va.  
Williams—G. H. Williams Co., The, Erie, Pa.

**BUCKETS, DRAG SCRAPER.**

Brown Hoisting Machinery Co., Cleveland, O.  
Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
Eagle Foundry & Machine Co., Ft. Scott, Kans.  
Hoisting Machinery Co., New York, N. Y.  
Insley Mfg. Co., Indianapolis, Ind.  
Link-Belt Company, Chicago and Philadelphia.  
Monaghan Machine Co., Chicago, Ill.

**BUCKETS, ELEVATING AND HOISTING.**

Alvey-Ferguson Co., The, Louisville, Ky.

Bailey—Burruss Mfg. Co., Atlanta, Ga.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Beckley Perforating Co., Garwood, N. J.  
 Biehl Iron Works Corp., The, Reading, Pa.  
 Blaw-Knox—Blaw-Knox Co., Pittsburgh, Pa.  
 Brown Hoisting Machine Co., Cleveland, O.  
 Buchanan—C. G. Buchanan Co., Inc., New York, N. Y.  
 Caldwell & Son Co., H. W., Chicago, Ill.  
 Clark, W. J., Co., Salem, O.  
 Codd Tank & Specialty Co., Baltimore, Md.  
 Cross Engineering Co., Carbondale, Pa.  
 Dover Boiler Works, Dover, N. J.  
 Drake-Williams-Mount Co., Omaha, Neb.  
 Federal Malleable Co., West Allis, Wis.  
 Howe Chain Co., Muskegon, Mich.  
 Hunt Co., C. W., West New Brighton, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Insley Mfg. Co., Indianapolis, Ind.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Jones Foundry & Equipment Co., Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.  
 Littleford Bros., Cincinnati, O.  
 McMyler-Interstate Co., Bedford, O.  
 Mansfield Engineering Co., Indianapolis, Ind.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Michigan Sprocket Chain Co., Detroit, Mich.  
 Nurdyke & Marmon Co., Indianapolis, Ind.  
 Parker, S. E., Chicago, Ill.  
 Phillips, Doup Co., Brooklyn, N. Y. (mine).  
 Power & Mining Machinery Co., New York, N. Y.  
 Reliance—Universal Road Machinery Co., Kingston, N. Y.  
 Rex—Chain Belt Co., Milwaukee, Wis.  
 Robins Conveying Belt Co., New York, N. Y.  
 Sackett Screen & Chute Co., Chicago, Ill.  
 Salem—Mullins Body Corp., Stamping Dept. A., Salem, O.  
 Seafie, Wm. B., & Sons Co., Pittsburg, Pa.  
 Smith Engineering Works, Milwaukee, Wis.  
 Smith—The T. L. Smith Co., Milwaukee, Wis.  
 Steel Basket & Specialty Co., Cedar Rapids, Iowa.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Stuebner, G. L., Iron Works, Long Island City, N. Y.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 Weller Mfg. Co., Chicago, Ill.  
 Western Pipe & Steel Co., Los Angeles, Cal.

**BUCKETS OR PAILS, FIRE.**

Acorn—Acorn Brass Mfg. Co., Chicago, Ill.  
 Cliff & Guilbert Co., New York, N. Y.  
 "Cream City"—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Eureka—Eureka Chemical Fire Pail Co., Philadelphia, Pa.  
 Fibratta—Cordley & Hayes, New York, N. Y.  
 Foamite Firefoam Co., New York, N. Y.

**Foamite Firefoam Company**  
**ONE FIREFOAM FIRE PAIL**  
 capacity of 24 gallons of FIREFOAM — equals 8 pails of water  
**Fire Protection Engineers**  
 200 Fifth Avenue New York City

Handlan—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Harris Fire Apparatus Co., New York, N. Y.  
 Hayward, S. F., & Co., New York, N. Y.  
 Rowe, A. C., & Son, Inc., New York, N. Y.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 Sexton Can Co., Boston, Mass.  
 Steel Basket & Specialty Co., Cedar Rapids, Iowa.  
 Wheeling—Wheeling Corrugating Co., Wheeling, W. Va.  
 Wilson & Co., F. Cortez, Chicago, Ill.

**BUCKETS, FURNACE CHARGING.**

American Foundry Equipment Co., New York.

**BUCKETS, GRAB, ELECTRIC.**

Brown Hoisting Machinery Co., Cleveland, O.  
 Browning Co., Cleveland, O.  
 Euclid—Euclid Crane & Hoist Co., Euclid, O.  
 Hunt, C. W., Co., Inc., New York, N. Y.  
 Industrial Works, Bay City, Mich.  
 Lakewood Engineering Co., Cleveland, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 P. & H.—Pawling & Harnischfeger Co., Milwaukee, Wis.  
 Williams—G. H. Williams Co., Erie, Pa.

**BUCKETS, GREASE.**

Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Rose—Frank Rose Mfg. Co., Hastings, Neb.  
 Walters Mfg. Co., Pittsburgh, Pa.

**BUCKETS, HOISTING, SELF-DUMPING.**

Blaw-Knox—Blaw-Knox Co., Pittsburgh, Pa.  
 Brown Hoisting Machinery Co., Cleveland, O.  
 Evans, F. H., Brooklyn, N. Y.  
 Insley Mfg. Co., Indianapolis, Ind.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Link-Belt Company, Chicago and Philadelphia.  
 Northern Engineering Works, Detroit, Mich.  
 Potter Mfg. Co., Indianapolis, Ind.  
 Syracuse Chilled Plow Co., Syracuse, N. Y.

**BUCKETS, MALLEABLE, ELEVATOR.**

Howe Chain Co., Muskegon, Mich.  
 Link-Belt Company, Chicago and Philadelphia, Pa.

**BUCKETS, PUMP, RUBBER.**

Chain Products Co., Cleveland, O.  
 Crosby—The Crosby Co., Cuba, N. Y.  
 Diamond Rubber Co., The, Akron, O.  
 ♦ Mechanical Rubber Co., Cleveland, O.  
 Queen—The Crosby Co., Cuba, N. Y.  
 Swivel Link—The Crosby Co., Cuba, N. Y.  
 Wyckoff, A., & Son Co., Elmira, N. Y.

**BUCKETS, SAND.**

Blaw-Knox—Blaw-Knox Co., Pittsburgh, Pa.  
 Cook, A. D., Lawrenceburg, Ind.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Johnson Mfg. Co., Urbana, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Mullins Body Corp., Stamping Dept. A., Salem, O.  
 Pioneer—Mansfield Engineering Co., Indianapolis, Ind.  
 Williams—G. H. Williams Co., The, Erie, Pa.

**BUCKETS, STEEL.**

Biehl Iron Works, Inc., The, Reading, Pa.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Johnson Mfg. Co., Urbana, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
 Mullins Body Corp., Stamping Dept. A., Salem, O.  
 Petroleum Iron Works Co., The, Sharon, Pa.

**BUCKLES, BOOT AND STRAP.**

Russell, John M. Mfg. Co., Inc., The, Naugatuck, Conn.

**BUFFERS, ELECTRIC.**

Coates—Coates Clipper Mfg. Co., Worcester, Mass.  
 Rochester Electric Products Corp., Rochester, N. Y.  
 Stow Mfg. Co., Binghamton, N. Y.  
 U. S.—United States Electrical Mfg. Co., Los Angeles, Cal.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.

**BUGGIES, LUMBER.**

(See also "Trucks, Lumber.")

Bartlett, A. F., & Co., Saginaw, Mich.  
 Francis, Chas. E., Co., Rushville, Ind.  
 Streich, A., & Bro. Co., Oshkosh, Wis.  
 Western Wheelbarrow Mfg. Co., South Fort Smith, Ark.

**BUGGIES, ORE AND COKE.**

(See also "Machinery, Mining.")

Carlin's Sons, Thos., Pittsburg, Pa.  
 Kilbourne & Jacobs Mfg. Co., Columbus, O.  
 Sackett-Chicago—Sackett Screen & Chute Co., Chicago, Ill.  
 Sheffield Car Co., Three Rivers, Mich.

**BUILDINGS, FACTORY, STANDARD.**

Blaw-Knox—Blaw-Knox Co., Pittsburgh, Pa.  
 Milliken—Milliken Brothers Mfg. Co., Inc., New York.

**BULBS, RUBBER.**

Bernz Co., Otto, Newark, N. J.  
 Canfield Co., H. O., The, Bridgeport, Conn.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Durst Mfg. Co., New York, N. Y.  
 Frank Bros., New York, N. Y.  
 ♦ Goodrich—B. F. Goodrich Co., Akron, O.  
 Helland—Geo. W. Helland, New York, N. Y.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Sexauer, J. A., Mfg. Co., New York, N. Y.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York.  
 Wolverine Brass Works, Grand Rapids, Mich.

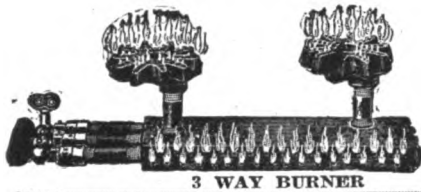
**BULLDOZERS.**

Ajax Mfg. Co., The, Cleveland, O.  
 Bliss Co., E. W., Brooklyn, N. Y.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.  
 Long & Allstatter Co., Hamilton, O.  
 Lourie Mfg. Co., Springfield, Ill.  
 National Machinery Co., The, Tiffin, O.  
 New Doty Mfg. Co., Janesville, Wis.

# J. A. Zurn Manufacturing Co., Erie, Pa.

## Natural Gas Burners

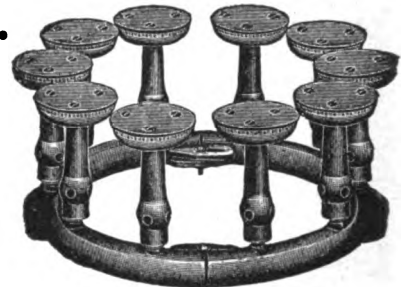
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Niles-Bement-Pond Co., New York, N. Y.  
Rock River, Badger—Rock River Machine Co.,  
Janesville, Wis.  
Ryerson, Joseph T., & Son, Chicago, Ill.  
Williams, White & Co., Moline, Ill.

#### BULL'S-EYE SIGHT FEED.

◆ Powell, Wm., Co., The, Cincinnati, O.

#### BUMPERS, FELT, RUBBER, LEATHER.

Advance—Advance Felt Cutting Co., Chicago, Ill.  
Best Leather Nut Co., Stoneham, Mass.

#### BUMPERS, RUBBER, CLOSET SEAT.

Barwood—L. J. Barwood Mfg. Co., Stoneham, Mass.  
Boston Belting Co., Boston, Mass.  
Canfield Co., H. O., The, Bridgeport, Conn.  
Canfield Rubber Co., The, Bridgeport, Conn.  
◆ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
Diamond—Diamond Rubber Co., Inc., Akron, O.  
Duckwell Belting & Hose Co., Indianapolis, Ind.  
Elkhart Rubber Works, Elkhart, Ind.  
Good Mfg. Co., New York, N. Y.  
◆ Goodrich—B. F. Goodrich Co., Akron, O.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Holland—Geo. W. Holland, New York.  
Holly—J. D. Johnson Co., Philadelphia, Pa.  
Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
◆ New York Belting & Packing Co., New York, N. Y.  
Norwalk Mfg. Co., East Norwalk, Conn.  
Pfau Mfg. Co., Cincinnati, Ohio.  
Quaker City Rubber Co., Philadelphia, Pa.  
Quick Detachable—Adam A. Long, Rochester, N. Y.  
Relyo—Haines, Jones & Cadbury Co., Philadelphia.  
Star Bar—Closet Seat Bumper Co., Cincinnati, O.  
◆ United States Rubber Co., Mechanical Goods Div.,  
New York.  
Western Rubber Co., Goshen, Ind.  
Williams-Bowman Rubber Co., The, Chicago, Ill.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

#### BUMPERS, RUBBER, CLOSET SEAT, STRAP.

Canfield Rubber Co., The, Bridgeport, Conn.

#### BUNDLERS, KINDLING WOOD.

American—American Saw Mill Machinery Co., Hack-  
ettstown, N. J.

#### BUNG BUSHINGS AND TOOLS, FOR BEER BARRELS.

Heartley Machine Variety Iron & Tool Co., Toledo, O.

#### BUNGS, BARREL, DISCHARGING.

Optimo—L. A. Morgan Co., Inc., Brookline, Mass.

#### BUNKERS, COAL.

Littleford Bros., Cincinnati, O.  
Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.

#### BUNKS, STEEL.

Fort Pitt—Fort Pitt Bedding Co., Pittsburgh, Pa.  
Tiger—Haggard & Marcusson Co., Chicago, Ill.

#### BUOYS, ACETYLENE GAS LIGHTED.

New York Central Iron Works Co., Hagerstown, Md.  
Pintsch—The Safety Car Heating & Lighting Co.,  
New York.  
Riverside—Riverside Boiler Works, Inc., Cambridge,  
Mass.

#### BURLAP AND BARREL COVERS.

◆ By-Products Division—E. I. du Pont de Nemours & Co.,  
Wilmington, Del.  
Hanover Cordage Co., Hanover, Pa.

Hoffman-Corr Mfg. Co., New York, N. Y.  
Hydrex Felt & Engineering Co., New York, N. Y.  
(Hydrex waterproof).

#### BURNERS, ACETYLENE GAS.

Airco—Air Reduction Sales Co., New York, N. Y.  
Alco—American Lava Corporation, Inc., Chatta-  
nooga, Tenn.  
Ambo—American Lava Co., Inc., Chattanooga, Tenn.  
Auto—American Lava Corporation, Inc., Chatta-  
nooga, Tenn.  
Bastian-Blessing Co., Chicago, Ill.  
Bray's—Wm. M. Crane Co., New York, N. Y.  
Colonial—Colonial Mfg. Co., Chattanooga, Tenn.  
De Luxe—American Lava Corporation, Inc., Chatta-  
nooga, Tenn.  
Duro, Pilot, Cluster, Regulator—American Lava Co.,  
Chattanooga, Tenn.  
Hilo—American Lava Co., Inc., Chattanooga, Tenn.  
Ideal—Ideal Co., Johnstown, Pa.  
Kirchberger, M. & Co., Inc., Brooklyn, N. Y.  
Peerless Light Co., Chicago, Ill.  
Werlin—The Ohio Pump & Brass Co., Columbus, O.  
Wonder—D. M. Steward Mfg. Co., Chattanooga, Tenn.

#### BURNERS, ANNEALING.

Billow—National Supply Co., Chicago, Ill.  
Buzzer—Charles A. Hones, Inc., Baldwin, Long  
Island, N. Y.  
Improved Appliance Co., Brooklyn, N. Y.  
Rockwell Furnace Co., New York, N. Y.

#### BURNERS, AUTOMATIC BLAST.

Buzzer—Charles A. Hones, Inc., Baldwin, Long Is-  
land, N. Y.

#### BURNERS, BUNSEN.

Buzzer—Charles A. Hones, Inc., Baldwin, Long Is-  
land, N. Y.  
Improved Appliance Co., Brooklyn, N. Y.  
Johnson Gas Appliance Co., Cedar Rapids, Ia.  
Newark Brass Works, Newark, N. J.  
Selas—Selas Company, Philadelphia, Pa.

#### BURNERS, COMBINATION, FOR FUEL OIL AND GAS.

Gilbert & Barker Mfg. Co., Springfield, Mass.  
Gwynn Engineering Co., Pittsburgh, Pa.  
RMC—Rotary Mfg. Co., Los Angeles, Cal.  
◆ Swartwout—The Ohio Body & Blower Co., Clevel-  
land, O.  
Tate, Jones & Co., Inc., Pittsburgh, Pa.  
Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

#### BURNERS, FUEL AND NATURAL GAS.

Aldrich Mfg. Co., Buffalo, N. Y.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Lava Co., Inc., Chattanooga, Tenn.  
Ashbaugh—Bremen Mfg. Co., The, Bremen, O.  
Barber—Cleveland Gas Burner & Appliance Co., Clevel-  
land, O. (For heating boilers).  
Billow—National Supply Co., Chicago, Ill.  
Bray—Wm. M. Crane Co., New York, N. Y.  
Buzzer—Chas. A. Hones, Inc., Baldwin, Long Island,  
N. Y.  
Calorex—Best, W. N., New York.  
Caloric—Reineke, Wilson Co., Pittsburgh, Pa.  
Century—Wilson & Daum Co., Pittsburgh, Pa.  
Coleman—Foundry Equipment Co., Cleveland, Ohio.  
Columbus Brass Co., Columbus, O.  
Columbiana Boiler Co., Columbiana, O.  
Crane Co., Wm. M., New York.  
Crone—F. B. Crone, Buffalo, N. Y.  
Crown—Wilson & Daum Co., Pittsburgh, Pa.  
Crown Brick—E. C. Merrill, Pittsburgh, Pa.  
Davidson—N. C. Davidson Gas Burner & Welding Co.,  
Pittsburgh, Pa.  
Eriez—Eriez Stove & Mfg. Co., Erie, Pa.  
Flinn & Dreffeln Co., Chicago, Ill.

Franklin—The Trolley Supply Co. (Gas appliance Dept.), Massillon, O.  
 Gwynn Engineering Company, Pittsburgh, Pa.  
 Hardwick System—Hardwick Mfg. Co., Erie, Pa. (for heating boilers).  
 Haynes Langenberg Mfg. Co., St. Louis, Mo.  
 Heavy Duty—Wilson & Daum Co., Pittsburgh, Pa.  
 Henry Bros., Massillon, O.  
 Herbert Boiler Co., The, Chicago, Ill.  
 Holland—J. A. Zura Mfg. Co., Erie, Pa.  
 Houchin, Thos. W. Co., Inc., New York, N. Y.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Invincible—Mercantile Supply Co., Chicago, Ill.  
 Ironton Bunsen—Ironton Stove & Mfg. Co., Ironton, O.  
 Jamison, T. H., Claysville, Pa.  
 Johnson Gas Appliance Co., Cedar Rapids, Iowa.  
 Jumbo—American Lava Co., Inc., Chattanooga, Tenn.  
 Jumbo—Colonial Mfg. Co., Chattanooga, Tenn.  
 Kemp, C. M., Mfg. Co., Baltimore, Md.  
 Keystone—Wilson & Daum Co., Pittsburgh, Pa.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Lamy, A. & Son, Elizabeth, N. J.  
 Lawler's Hot Blast—Lawler Regulator Co., New York  
 Lawler's Volcano—Lawler Regulator Co., New York  
 Matlack, W. H., Louisville, Ky.  
 Meco Way—The Manufacturers' Equipment Co., Dayton, O.  
 Monarch Engineering & Mfg. Co., The, Baltimore, Md.  
 Multiple—Wilson & Daum Co., Pittsburgh, Pa.  
 National Products Co., East Liverpool, Ohio.  
 Odin—Odin Stove Mfg. Co., Erie, Pa.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Oven Equipment Mfg. Co., New Haven, Conn. (Enclosed flame).  
 Paragon—Wilson & Daum Co., Pittsburgh, Pa.  
 Perfecto—Hydro Heater Co., Pittsburgh, Pa.  
 Quigley Furnace & Foundry Co., New York, N. Y.  
 Reliable—Schneider & Trenkamp Co., Cleveland, O.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, Ohio.  
 Rallance—Wilson & Daum Co., Pittsburgh, Pa.  
 Rockwell, W. S., Co., New York  
 Rotary—Rotary Mfg. Co., Los Angeles, Calif.  
 Rowe's—L. L. Rowe, Boston, Mass.  
 Selas—The Selas Co., Philadelphia, Pa.  
 Solar—Wilson & Daum Co., Pittsburgh, Pa.  
 Standard—The Armstrong Mfg. Co., Huntington, W. Va.  
 Standard—Standard Heating & Radiator Co., Pittsburgh, Pa. (Steam and hot water.)  
 Star—Wilson & Daum Co., Pittsburgh, Pa.  
 Straight Line—E. C. Merrill, Pittsburgh, Pa.  
 Sun, Sunflower—Wilson & Daum Co., Pittsburgh, Pa.  
 Tate, Jones Co., Inc., Pittsburgh, Pa.  
 Triplex—The Armstrong Mfg. Co., Huntington, W. Va.  
 Troop Mfg. Co., Pittsburgh, Pa.  
 Tryxon—The Bennett Furnace Co., Cleveland, O.  
 Underwood System—Manufacturers' Equipment Co., Dayton, O.  
 Vim—Silver & Co., Brooklyn, N. Y.  
 Welmer Machine Works Co., Lebanon, Pa.  
 Wheeling—Wheeling Stove & Range Co., Wheeling, W. Va.  
 Wonder—Wilson & Daum Co., Pittsburgh, Pa.  
 York—Abendroth Bros., Port Chester, N. Y.

#### BURNERS, FUEL OIL.

Aeroil—Aeroil Burner Co., Inc., Union Hill, N. J.  
 American Crude Oil Burner Co., San Francisco, Cal.  
 Anderson—N. C. Davison Gas Burner & Welding Co., Pittsburgh, Pa.  
 Anthony Nebulyte—The Anthony Co., Long Island City, N. Y.  
 Bellevue Furnace Co., Detroit, Mich.  
 Best, W. N., Inc., New York, N. Y.  
 Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
 Billow—National Supply Co., Chicago, Ill.  
 Buckeye—Macleod Co., The, Cincinnati, Ohio.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Cleveoil—Cleveland Gas Burner & Appliance Co., Cleveland, Ohio.  
 Crane Oil Burner Co., Chicago, Ill.  
 E G—Economy Gas Valve Co., Minneapolis, Minn.  
 Fess—Fess System Co., San Francisco, Calif.  
 Fess System—Petroleum Heat & Power Co., New York City.  
 Franklin Gas Burner Mfg. Co., Cincinnati, O.  
 Glafko—Loggers' Oil Equipment Co., Portland, Ore.  
 Gwynn—Gwynn Engineering Company, Pittsburgh, Pa.  
 Hammel—Hammel Oil Burning Equipment Co., Inc., Providence, R. I.  
 Hausfeld-Campbell Co., The, Harrison, O.  
 Improved Appliance Co., The, Brooklyn, N. Y.  
 Japhets—E. L. Miller Mfg. Co., Kansas City, Mo.  
 Johnson Low Pressure, Air, Johnson Rotary, Johnson Steam, Johnson Whirlwind—S. T. Johnson Co., San Francisco, Calif.  
 Kirkwood—Tate, Jones & Co., Pittsburgh, Pa.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Lalor Fuel Oil System Co., Baltimore, Md.  
 Leahy—Leahy Mfg. Co., Los Angeles, Calif.  
 Le Vake—Steam Supply & Rubber Co., Seattle, Wash.

Little Giant—G. E. Witt Co., Inc., San Francisco, Cal.  
 Lockett Multi-Plate Burner—A. M. Lockett & Co., Ltd., New Orleans, La.  
 Lunkenheimer Co., Cincinnati, O.  
 Mahr Mfg. Co., Minneapolis, Minn.  
 McKneat Mfg. Co., New York  
 Meco—Modern Engineering Co., St. Louis, Mo.  
 Monarch, Monarch Rockwell—Monarch Engineering & Mfg. Co., The, Baltimore, Md.  
 Newark Oil Burning Devices Co., Newark, N. J.  
 Norris Bros., Inc., Robinson, Ill.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Parson—Parson Mfg. Co., New York, N. Y.  
 Peabody—A. M. Lockett & Co., Inc., New Orleans, La.  
 Quigley Furnace & Foundry Co., New York, N. Y.  
 Reid, Joseph, Gas Engine Co., Oil City, Pa.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.  
 Rockwell, W. S., Co., New York, N. Y.  
 Rotary—Rotary Mfg. Co., Los Angeles, Cal.  
 Sauer Power Generator Co., Pittsburgh, Pa.  
 Scientific Instrument Co., Detroit, Mich.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Urn Burner—Johnson Gas Appliance Co., Cedar Rapids, Iowa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Weiler Mfg. Co., Chicago, Ill.

#### BURNERS OR INCINERATORS, GARBAGE AND TOILET.

Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Androck—Andrews Wire & Iron Works, Rockford, Ill.  
 Ansonia Sanitary Mfg. Co., New York, N. Y.  
 Anthony Co., The, Long Island City, N. Y.  
 Baker's—Iowa Mfg. Co., Oskaloosa, Ia.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Burke Furnace Co., Chicago, Ill.  
 Clark, W. J., Co., Salem, O.  
 Cragin—M. J. Cragin, Chicago, Ill.  
 Dean—Washburn & Granger, Inc., New York, N. Y.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Dube—Grand Crossing Boiler Wks., Chicago, Ill.  
 Eclipse—Standard Wire Co., New Castle, Pa.  
 Equator—The Herbert Boiler Co., Chicago, Ill.  
 Garratt—W. D. Garratt & Co., New York, N. Y.  
 G-R—Griscom-Russell Co., New York, N. Y.  
 Guardian Gas Appliance Co., Cleveland, O.  
 Heenan—The Destructor Co., New York, N. Y.  
 Herbert—The Herbert Boiler Co., Chicago, Ill.  
 Imico—Illinois Malleable Iron Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Incinerite—E. C. Stearns & Co., Syracuse, N. Y.  
 Incinerite—Shannon Mfg. Co., New York, N. Y.  
 Isolator—Buffalo Co-Operative Stove Co., Buffalo, N. Y.  
 Isolator—United States Incinerator Contracting Co., New York, N. Y.  
 Johnson—W. H. Johnson & Son Co., Indianapolis, Ind.  
 Kernerator—Kerner Incinerator Co., The, Milwaukee, Wis.  
 Kewanee—Kewanee Boiler Co., Kewanee, Ill.  
 Phelps—Ideal Mfg. & Supply Co., Oskaloosa, Ia.  
 Pittsburgh Garbage Incinerator Co., Pittsburgh, Pa.  
 Pyrofuse—J. B. Prescott & Son, Webster, Mass.  
 Ruud—Ruud Mfg. Co., Pittsburgh, Pa.  
 Safety—W. J. Clark Co., Salem, Ohio.  
 Sanotype—Buffalo Corporate Stove Co., Buffalo, N. Y.  
 Sanotype—United States Incinerator Contracting Co., New York, N. Y.  
 Sims—The Sims Co., Erie, Pa.  
 Superior—The Standard Wire Co., New Castle, Pa.  
 U. S.—United States Incinerator Contracting Co., New York, N. Y.  
 White Vulcan—Decaire Incinerator Co., Hopkins, Minn.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.

#### BURNERS, GAS, ASBESTOS.

Eclipse—Frank B. Test, Toledo, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Reliable—Schneider & Trenkamp Co., Cleveland, O.  
 Union Gas Burner Co., Buffalo, N. Y.

#### BURNERS, GAS, WITH FRICTION LIGHTERS.

Alco 4 4 A Never Miss—American Lava Co., Inc., Chattanooga, Tenn.

#### BURNERS, GAS LIGHTING.

(See also "Lamps, Gas.")

Acme—H. Adler & Co., Inc., Pittsburgh, Pa.  
 American Lava, Inc., Chattanooga, Tenn.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Climax—Climax Mach. & Burner Co., Newark, N. J.  
 Crescent—The Crescent Burner Mfg. Co., New York  
 Delery—General Gas Appliance Co., New York, N. Y.  
 Detroit Heating & Lighting Co., Detroit, Mich.  
 Equitable—Equitable Meter Co., Pittsburgh, Pa.  
 Eureka Water Heater Co., Chicago, Ill.  
 Gwynn Gas Burner & Engineering Co., Pittsburgh, Pa.  
 Hahn—American Lava Corp., Chattanooga, Tenn.  
 Hawks—Hugo Manufacturing Co., Duluth, Minn.  
 Jumbo—D. M. Steward Mfg. Co., Chattanooga, Tenn.

Lawler's—Lawler Regulator Co., New York, N. Y.  
 Lindsay—Lindsay Light Co., Chicago, Ill.  
 Matchless Mfg. Co., New York, N. Y.  
 Miller—Edward Miller & Co., Meriden, Conn.  
 Mueller Mfg. Co., H., Decatur, Ill. (gas post).  
 New Market—D. M. Steward Mfg. Co., Chattanooga, Tenn.

Parson Mfg. Co., Elizabeth, N. J.  
 Sauer Power Generator Co., Pittsburg, Pa.  
 Silver Co., Brooklyn, N. Y.  
 Springfield—Gilbert & Barker, Springfield, Mass.  
 Standard, Triplex—Standard Stamping Co., Hunting-ton, W. Va.

- ◆ Star—Roberts Brass Mfg. Co., The, Detroit, Mich.
- Sun Vapor & Gas Street Light Co., The, Canton, O.
- Tirrill—Tirrill Gas Machine Lighting Co., New York
- Tryxon—The Bennett Furnace Co., Cleveland, O.
- ◆ Turner Brass Works, The, Sycamore, Ill.
- Union Gas Burner Co., Buffalo, N. Y.
- Waterbury Mfg. Co., Waterbury, Conn.

#### BURNERS, GAS, SPECIAL FORMS.

American Lava Co., Inc., Chattanooga, Tenn.  
 Anthony Co., The, Long Island City, N. Y.  
 Boekel & Co., Wm., Philadelphia, Pa.  
 Boomer—The Hess-Snyder Co., Massillon, O.  
 Buzzer—Charles A. Homes, Inc., Baldwin, Long Is-land, N. Y.  
 Frederick-Elder Co., The, Bridgeville, Pa.  
 Gregory—Gas Tip & Self-Lighter Co., New York, N. Y.  
 Houchin Co., Inc., Thos. W., New York, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Rival—H. Adler & Co., Inc., Carnegie, Pa.  
 Stamford—Stamford Gas Stove Co., Stamford, Conn.

#### BURNERS, GAS, URM.

Improved Appliance Co., Brooklyn, N. Y.  
 Stamford Gas Stove Co., Stamford, Conn.

#### BURNERS, GASOLINE.

Best—The Best Light Co., Canton, O.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Hawkeye Mfg. Co., Waterloo, Iowa.  
 Hollands—J. A. Zurn Mfg. Co., Erie, Pa.  
 Imperial—Royal Gas Light Co., Chicago, Ill.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.  
 Sun—Sun Vapor & Gas Street Light Co., Canton, O.  
 Tirrill—Tirrill Gas Machine Lighting Co., New York.

#### BURNERS, KEROSENE OR OIL, FOR COOK STOVES.

Gloria Light Co., Chicago, Ill.  
 International Heating Co., St. Louis, Mo.

#### BURNERS, KEROSENE OR OIL, FOR HEATING BOILERS.

Aeroil—Aeroll Burner Co., Inc., Union Hill, N. J.  
 Atlas—Atlas Oil Burner Co., Chicago, Ill.  
 Climax—E. L. Miller Mfg. Co., Kansas City, Mo.  
 Crane—Crane Oil Burner Co., Chicago, Ill.  
 Fess—Fess System Co., San Francisco, Cal.  
 Gloria—Gloria Light Co., Chicago, Ill.  
 Johnson, S. T. Co., San Francisco, Cal.  
 Kittel George, P., Union Hill, N. Y.  
 Kleen Heet—Winslow Boiler & Engineering Co., Chicago, Ill.  
 Nokol—Amalgamated Machinery Corp., Chicago, Ill.

#### BURNERS, LEAD.

(See "Apparatus, Lead Burning.")

#### BURNERS AND STOKERS, LOW GRADE FUEL, COAL DUST, SAWDUST, ETC.

(See also "Carburetors, Powdered Coal")  
 Allington & Curtis Mfg. Co., Saginaw, Mich.  
 Amsler, Walter O., Pittsburgh, Pa.  
 Grinde—Grindle Fuel Equipment Co., Chicago, Ill.  
 Holbeck System—Bonnot Co., Canton, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 J. R. S.—Mechanville Specialty Supply Mfg. Co., Mechanville, N. Y.  
 K-B—Pulverizer Co., Inc., New York, N. Y.  
 Lopulco—Combustion Engineering Corp., New York.  
 Prest-O-Lite Co., Inc., Indianapolis, Ind.  
 Pruden—Powdered Coal Engineering & Equipment Co., Chicago, Ill.  
 Quigley Furnace Specialties Co., New York, N. Y.  
 Smidth, F. L., & Co., New York.  
 Stroud, E. H., & Co., Chicago, Ill.

#### BURNERS, PAINT.

Best—The Best Light Co., Canton, O.  
 Block's—Atlas Brass Works, San Francisco, Cal.  
 Buzzer—Charles A. Homes, Inc., Baldwin, Long Is-land, N. Y.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.

Mahr—Mahr Mfg. Co., Minneapolis, Minn.  
 Quick Metal Stove Co., Div. American Stove Co., St. Louis, Mo.  
 Turner Hot Blast—The Turner Brass Works, Sycamore, Ill.

#### BURNERS, PREHEATING, COAL OIL.

Meco—Modern Engineering Co., St. Louis, Mo.  
 Milburn, Alexander, Co., Baltimore, Md.

#### BURNERS, PYrites.

Improved Appliance Co., Brooklyn, N. Y.  
 Valk & Murdock Co., Charleston, S. C.

#### BURNERS, REFUSE.

Bretting Mfg. Co., C. G., Ashland, Wis. (sawmill).  
 Dixon Engineering & Construction Co., Toledo, O.  
 Manistee Iron Works Co., Manistee, Mich.  
 Muskegon Boiler Works, Muskegon, Mich.  
 Sterling—Griscom-Russell Co., New York, N. Y.

#### BURNERS, RUBBISH, STEEL OR WIRE.

Cyclone Red Tag—Cyclone Fence Co., Waukegan, Ill.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.

#### BURNERS, SULPHUR.

Valley Iron Works Co., Appleton, Wis.  
 Wise—Raquette Foundry & Supply Co., Massena, N. Y.

#### BURNS, IRON.

Cobb & Drew, Inc., Plymouth, Mass.  
 Falls Rivet Co., Kent, O.

#### BURNS, STEEL.

Stanley Works, The, New Britain, Conn.

#### BUSHINGS, BUNG.

Heartley Machine, Variety Iron & Tool Works, Toledo, O.

#### BUSHINGS, CASING.

Newbury, Jay Herbert, Goshen, N. Y.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.

#### BUSHINGS, CIRCULATING OIL.

COB—W. T. Shackley & Son Co., Boston, Mass.

#### BUSHINGS, DIE STOCK.

Adjustable Bard—The Armstrong Mfg. Co., Bridgeport, Conn.  
 National Automatic Tool Co., Richmond, Ill.  
 Universal Tool Co., The, Springfield, Mass.  
 ◆ Walworth Mfg. Co., Boston, Mass.

#### BUSHINGS, FIBRE.

Delaware Hard Fibre Co., Wilmington, Del.  
 ◆ Diamond—Diamond State Fibre Co., Bridgeport, Pa.

#### BUSHINGS, HOSE.

Schlungen Bros. Co., Chicago, Ill.

#### BUSHINGS, OILLESS, SELF-LUBRICATING.

(See also, "Bearings, Self-lubricating.")  
 Ajax—James Hunter Machine Co., North Adams, Mass.  
 American Vulcanized Fibre Co., Wilmington, Del.  
 Arguto—Arguto Oilless Bearing Co., Philadelphia, Pa.  
 Bound Brook Oil-Less Bearing Co., Bound Brook, N. J.  
 Brown—Brown Engineering Co., Reading, Pa.  
 Burlingame Co., A., Worcester, Mass.  
 ◆ Chicago Pulley & Shafting Co., Chicago, Ill.  
 Graphite Metallizing Corp., Yonkers, N. Y.  
 Lubrite—Merriman Bros., Boston, Mass.  
 McMillan's Sons, W. H., New York, N. Y.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Merriman Bros., Boston, Mass.  
 Metaline Co., The, Long Island City, N. Y.  
 Nolu—Nolu Oilless Bearing Co., Philadelphia, Pa.  
 O. & S.—O. and S. Bearing Co., Detroit, Mich.  
 Torrey Roller Rushing Works, Bath, Me.  
 ◆ Western Block Co., Lockport, N. Y.

#### BUSHINGS, DRILL, JIG.

Up-to-Date Tool Co., Boston, Mass.

#### BUSHINGS, PIPE, BRASS AND BRONZE.

Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Copper Co., The, New York, N. Y.  
 American Bronze Corp., Berwyn, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Autocrat—United American Metals Corp., Brooklyn, N. Y.

- Barnard Mfg. Co., Spokane, Wash.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Bunting—Bunting Brass & Bronze Co., Toledo, O.  
 Burlington Brass Works, Burlington, Wis.  
 Cahill Mfg. Co., Worcester, Mass.  
 Central Brass Works, Cincinnati, O.  
 Davis & Hemphill, Elkridge, Md.  
 Durham—Prier Brass Mfg. Co., Kansas City, Mo.  
 Eclipse—Pacific Metal Works, San Francisco, Calif.  
 Elgin Brass Co., New York, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Faries Mfg. Co., Decatur, Ill.  
 Fries & Co., Buffalo, N. Y.  
 Gilbert's—A. Gilbert & Sons Brass Foundry Co., St. Louis, Mo.  
 Gopher—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Graham, James, & Co., New Haven, Conn.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hills-McCanna Co., Chicago, Ill.  
 Indiana Brass Co., The, Frankfort, Ind.  
 Jenkins Mfg. Co., New York, N. Y.  
 Jost's Sons, Edmund, Newark, N. J.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Loyal Brass Co., Cleveland, O.  
 Lunkenheimer Co., Cincinnati, O.  
 McNab & Harlan Mfg. Co., New York, N. Y.  
 ♦ McBas & Roberts Co., The, Detroit, Mich.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Muzzy Lyon Co., Detroit, Mich.  
 National Bronze & Aluminum Fdy. Co., Cleveland, O.  
 Oberdorfer Brass Co., M. L., Syracuse, N. Y.  
 Park & McKay Co., The, Detroit, Mich.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Prier—Prier Brass Mfg. Co., Kansas City, Mo.  
 Promet—American Crucible Products Co., Elyria, O.  
 Randall Graphite Products Corp., Chicago, Ill.  
 Red Jacket Mfg. Co., Davenport, Ia.  
 Regar Mfg. Co., The, Cleveland, Ohio.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Robertshaw Mfg. Co., Youngwood, Pa.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Standard Brass & Iron Works, Milwaukee, Wis.  
 Standard Gas Fixture Co., Bound Brook, N. J.  
 Star—U. T. Hungerford Brass & Copper Co., New York.  
 Sterling Specialty Co., Newcomertown, O.  
 Thiers & Kendrick Mfg. Co., Detroit, Mich.  
 Try-Me Mfg. Co., Westfield, Mass.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 United Brass & Aluminum Mfg. Co., Port Huron, Mich.  
 United Wire & Supply Co., Providence, R. I.  
 Velox—A. Gilbert & Sons Brass Foundry Co., St. Louis, Mo.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williams, E. A. & Son, Inc., Jersey City, N. J.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### BUSHINGS, PIPE, CAST IRON AND MALLEABLE IRON.

- Automatic Products Corp., Long Island City, N. Y.  
 Barnard Mfg. Co., Spokane, Wash.  
 Belfield Co., H., Philadelphia, Pa.  
 C—Crane Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 General Fire Extinguisher Co., New York, N. Y.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lambert & Co., Geo. B., Chicago, Ill.  
 McNab & Harlan Mfg. Co., New York, N. Y.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Newbury, Jay H. & Son, Goshen, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Ravena Iron Co., Ravena, N. Y.  
 Reidy Machine Screw Co., New Haven, Conn.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### BUSHINGS, PIPE, ECCENTRIC.

- Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### BUSHINGS, PULLEY.

- American Tool & Machine Co., Boston, Mass.  
 Bull Dog—Safety First Mfg. Co., Alexandria, Va.  
 Detroit Wood Pulley Co., Detroit, Mich.  
 ♦ Dodge Mfg. Co., Mishawaka, Ind.  
 Gilbert, A. & Sons, Brass Foundry Co., St. Louis, Mo.  
 Johnson Bronze Co., New Castle, Pa.  
 Karge System, Inc., Phoenix, N. Y.  
 Link-Belt Company, Chicago, Ill.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.

- Perfection—Flierl, Christian Co., Inc., Buffalo, N. Y.  
 Phillips Pressed Steel Pulley Works, Philadelphia, Pa.  
 ♦ Wood's, T. B., Sons Co., Chambersburg, Pa. (cast iron, phosphor bronze and bronze naphite).

#### BUSHINGS, RADIATOR.

- Flagg, Stanley G., & Co., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Newbury, Jay H. & Son, Goshen, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 New Wa—Neuman-Warnock Co., Beaver Dam, Wis.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Ravena Iron Co., Ravena, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### BUSHINGS, ROLLER.

- Torrey Roller Bushing Works, Bath, Me.  
 ♦ Western Block Co., Lockport, N. Y.

#### BUSHINGS, SOLDERING.

- Acheson Mfg. Co., Braddock, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Atkinson Co., The, Rochester, N. Y.  
 Ayling & Reichert Co., The, Toledo, O.  
 Boosey—Greenwood Mfg. Co., Detroit, Mich.  
 Hygrade—American Sanitary Mfg. Co., Abingdon, Ill.  
 Keystone Brass Works, Inc., Erie, Pa.  
 Rockford Brass Works, Rockford, Ill.  
 ♦ United Brass Mfg. Co., Cleveland, O.

#### BUSHINGS, TRAP.

- Frost Mfg. Co., The, Kenosha, Wis.  
 ♦ United Brass Mfg. Co., Cleveland, O.

#### BUSHINGS, WOOD.

- Detroit Pulley Co., Detroit, Mich.  
 Nigrum—Bound Brook Oil-Less Bearing Co., Bound Brook, N. J.  
 Rowe, Henry, Mfg. Co., Newaygo, Mich.

#### BUSTERS, RIVET.

- Boyer—Chicago Pneumatic Tool Co., New York.  
 Hinckley Machine Works, Hinckley, Ill.  
 Klein-Logan Co., The, Pittsburgh, Pa.  
 Paragon Tool Co., Seattle, Wash.  
 Standard Railway Equipment Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Vulcan Tool Mfg. Co., Quincy, Mass.

#### BUTTONS, HANDLES, INDEXES & KNOBS, ESCUTCHEONS, ETC., CHINA AND PORCELAIN FOR PLUMBING FIXTURES, GAS STOVES, ETC.

- Hutter, Karl, Inc., New York, N. Y.  
 Maddock's Sons Co., Thomas, Trenton, N. J.  
 Trenton Potteries Co., Trenton, N. J.  
 Union Porcelain Works, Inc., New York, N. Y.

#### BUTTONS, PUSH, FOR LOW TANK.

(See "Fittings and Trimmings, Closet Tank.")

- Frost Mfg. Co., The, Kenosha, Wis.  
 Griffin Mfg. Co., Erie, Pa.  
 Ideal Clamp Mfg. Co., Brooklyn, N. Y.  
 Kirchberger, M. & Co., Inc., Brooklyn, N. Y.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Root, C. J., Co., The, Bristol, Conn.  
 Stanley Works, The, New Britain, Conn.  
 Waterbury, Brass Goods Corp., Waterbury, Conn. (Wrought brass).

#### BUTTS AND HINGES, STEEL.

- R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Sargent—Sargent & Co., New Haven, Conn.

#### BY-PRODUCT GAS OVEN PLANTS.

- "Gasmaco"—Gas Machinery Co., The, Cleveland, O.

#### CABINETS AND HOLDERS FOR TOILET PAPER.

- Aetna Mfg. & Plating Co., Chicago, Ill.  
 All White—Bay Ridge Specialty Co., Brooklyn, N. Y.  
 American Brass & Novelty Co., Grand Haven, Mich.  
 American Ring Co., Waterbury, Conn.  
 A. P. W. Paper Co., Albany, N. Y.  
 Art Brass Co., New York, N. Y.  
 Bob White—A. P. W. Paper Co., Albany, N. Y.  
 Brasscrafters—Eustis Mfg. Co., J. P., Boston, Mass.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Central Specialty Mfg. Co., Chicago, Ill.  
 Chicago Oval—Geo. T. Johnson Co., Chicago, Ill.  
 Cline Mfg. Co., L., Chicago, Ill.  
 Diamond—A. P. W. Paper Co., Albany, N. Y.  
 Flat-O-Roll—The Brown-Thomas Co., Inc., Syracuse, N. Y.  
 Foley Paper Co., Springfield, Mass.  
 Golco—Golco Sanitary System, Philadelphia, Pa.  
 Lokin—American Brass & Novelty Co., Grand Haven, Mich.

## The Wellston Manufacturing Company

Manufacturers of Wellston, Ohio  
**STEEL CASES, BINS AND RACKS**  
 Ball Bearing, revolving, for Nails, Bolts, Tools, etc.  
 "SENATOR" WARM AIR FURNACES  
 Custom Machine Shop and Foundry in connection

Morgan Envelope Co., Div. (U. S. Envelope Co.), Springfield, Mass.  
 Mott Iron Works, The J. L., New York, N. Y.  
 No Waste—National Paper Products Co., Carthage, N. Y.  
 Ohio—The Ohio Brass & Iron Mfg. Co., Cleveland, O.  
 Omaha—The Galard Co., Newark, N. J.  
 Onilwon Cabinets—A. P. W. Paper Co., Albany, N. Y.  
 Paragon—The Sanitary Co., Cleveland, O.  
 Perfection Oval—The Geo. T. Johnson Co., Chicago, Ill.  
 Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
 Satin—The Shelby Spring Hinge Co., Shelby, O.  
 Scott—Scott Paper Co., Philadelphia, Pa.  
 Silk—The Shelby Spring Hinge Co., Shelby, O.  
 S. M. Co.—Searls Mfg. Co., Newark, N. J.  
 Smith—E. C. Smith Mfg. Co., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Taplin Mfg. Co., The, New Britain, Conn.  
 White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.

### CABINETS, BLUE PRINT.

Barshal Company, Inc., The, Cleveland, Ohio.  
 Economy Drawing Table Co., Toledo, O.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Rowe, Henry, Mfg. Co., Newaygo, Mich.  
 Yawman & Erbe Mfg. Co., Rochester, N. Y.

### CABINETS, FOR BOLTS, SCREWS, ETC.

American Bolt & Screw Case Co., Dayton, O.  
 Barshal Co., The, Cleveland, O.  
 Eclipse Bolt Case—Wellston Mfg. Co., Wellston, O.  
 Heller, W. C. & Co., Montpelier, O.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Wellston Mfg. Co., The, Wellston, O.  
 Wiley—Hall Mfg. Co., Harrison, N. J.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.

### CABINETS AND EQUIPMENT, FIRST AID, FOR FACTORIES.

American Standard Tourniquet Co., Portland, Me.  
 First Aid Equipment Co., New York, N. Y.  
 Hardy, F. A. & Co., Chicago, Ill.  
 Johnson's—Johnson & Johnson, New Brunswick, N. J.  
 La France—American La France Fire Engine Co., Elmira, N. Y.  
 M-S-A—Mine Safety Appliance Co., Pittsburgh, Pa.  
 Red Cross—Johnson & Johnson, New Brunswick, N. J.  
 Safety Equipment Service Co., The, Cleveland, O.

### CABINETS, FIRE HOSE.

Cliff & Gilbert Co., New York City.  
 Simmons, John, Co., New York, N. Y.  
 Two in One—Charles Muhring & Bros., Cincinnati, Ohio.

### CABINETS AND HOLDERS, INDIVIDUAL TOWEL.

Handy-Roll—The Brown-Thomas Co., Inc., Syracuse, N. Y.  
 Rouso's System—Individual Towel & Cabinet Service Co., Chicago, Ill.

### CABINETS, KEY.

Hart & Hutchinson Co., New Britain, Conn.

### CABINETS, MEDICINE FOR BATH ROOMS.

Brasscrafters—Eustis Mfg. Co., J. P., Boston, Mass.  
 Eastern Specialty Mfg. Co., Scranton, Pa.  
 Heap & Sons, Wm., Grand Haven, Mich.  
 Hess—Hess Warming & Ventilating Co., Chicago, Ill.  
 Ideal Reversible Hinge Cabinet Co., St. Louis, Mo.  
 Ivoroid—Haines, Jones & Cadbury Co., Philadelphia.  
 Leclair Cabinet Works, Edwardsville, Ill.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Nelson, N. O. Mfg. Co., St. Louis, Mo.  
 Nurre Mirror Plate Co., Bloomington, Ind. (wood or steel).  
 Omaha—The Galard Co., Newark, N. J.  
 Sanitary Specialties Co., Philadelphia, Pa.  
 Sanoid—Conant Bros. Co., Somerville, Mass.  
 Searls Mfg. Co., Newark, N. J.  
 Shwab Bros. Co., New York, N. Y.  
 Silver & Co., Brooklyn, N. Y.

Smith Mfg. Co., E. C., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Standard Tank & Seat Co., Camden, N. J.  
 Success—Success Mfg. Co., Gloucester, Mass.  
 S. & W.—Sharpless & Watt Co., Philadelphia, Pa. (porcelain enameled).  
 White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.

### CABINETS, LATHE TOOL.

♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
 Barshal Company, Inc., The, Cleveland, Ohio.

### CABINETS, OIL STORAGE.

(See also Cans, Oil Storage.)  
 American Oil Pump & Tank Co., The, Dayton, O.  
 Bowser & Co., S. F., Ft. Wayne, Ind.  
 Western Oil Pump & Tank Co., St. Louis, Mo.  
 Wiley—The New York Oil Cabinet Co., New York.  
 Wilson Steam Boiler Co., Omaha, Neb.

### CABINETS, PAPER TOWEL AND TOWELS.

Hobart Brothers Co., Troy, O.  
 Scott Paper Co., Philadelphia, Pa.

### CABINETS, SAND BLAST.

Macleod Co., The, Cincinnati, Ohio.

### CABINETS, STEEL, TOOL.

Bennett Mfg. Co., Alden, N. Y.  
 Hirschman, W. F., Co., Inc., Buffalo, N. Y.  
 Medart, Fred, Mfg. Co., St. Louis, Mo.

### CABINETS, STORAGE, FIREPROOF.

Atlantic Fire Prevention—Geo. H. Priggen Co., Boston, Mass.  
 Durand Steel Locker Co., Chicago, Ill.

### CABINETS AND SUPPLIES, ELECTRIC, CUT-OUT.

Columbia—Columbia Metal Box Co., New York, N. Y.  
 Hauer, J. B., Brooklyn, N. Y.

### CABINETS, WATER TESTING, FOR POWER PLANTS.

Chemo-Mechanical Water Improvement Co., Philadelphia.

### CABLES, ARMORED (ELECTRIC).

C. A. C.—Columbia Metal Hose Works, New York, N. Y.  
 Eastern Tube & Tool Co., The, Brooklyn, N. Y.  
 Pratt Chuck Co., Frankfort, N. Y.  
 Steelite—Inland Electric Co., Chicago, Ill.  
 ♦ Sterling—Garland Mfg. Co., Pittsburgh, Pa.  
 ♦ Youngstown Realflex—The Youngstown Sheet & Tube Co., Youngstown, O.

### CABLES, COPPER.

Ambrac—The American Brass Co., Waterbury, Conn.  
 ♦ American Steel & Wire Co., Chicago, Ill.

### CABLES AND ROPES, FIRE ESCAPE.

Rope Fire Escape Co., Philadelphia, Pa.

### CABLES, WELL DRILLING.

(See also, "Rope, Manila" and "Wire.")

American—The American Mfg. Co., New York, N. Y.  
 Columbian—Columbian Rope Co., Auburn, N. Y. (manila).  
 Drednaut—Upson-Walton Co., Cleveland, O.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Fittler Co., The Edwin H., Philadelphia, Pa.  
 Trojan—St. Louis Cordage Mills, St. Louis, Mo.  
 Wall Cable—Wall Rope Works, New York.  
 ♦ Waterbury Co., New York, N. Y.  
 Whitlock Cordage Co., New York, N. Y.  
 Winne, Frank W., & Son, Inc., Philadelphia, Pa.

### CABLEWAYS, DRAGLINE.

Sauerman Bros., Chicago, Ill.

### CABLEWAYS, OVERHEAD.

Blaw-Knox Co., Pittsburgh, Pa.  
 ♦ Broderick & Bascom Rope Co., St. Louis, Mo.  
 Clyde Iron Works, Duluth, Minn.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Flory—The S. Flory Mfg. Co., Bangor, Pa.  
 Hunt, C. W., Co., New York, N. Y.  
 Lambert Hoisting Engine Co., Newark, N. J.  
 Lenher Engineering Co., New York, N. Y.  
 Leschen Co.'s Patent—A Leschen & Sons Rope Co., St. Louis, Mo.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 McClintic-Marshall Const. Co., Pittsburg, Pa.  
 Mead-Morrison Mfg. Co., Boston, Mass.  
 Mundy, J. S., Hoisting Engine Co., Newark, N. J.  
 National Hoisting Engine Co., Harrison, N. J.  
 Potter Mfg. Co., Indianapolis, Ind.  
 Robins Conveying Belt Co., New York, N. Y.



Ruggles Machine Co., Poultney, Vt.  
Street Bros. Machine Works, Chattanooga, Tenn.  
Trenton Iron Co., Trenton, N. J.  
❖ Yale & Towne Mfg. Co., The, New York, N. Y.

**CADGERS, MINERS.**

❖ Gem—Gem Mfg. Co., Pittsburgh, Pa.

**CADMIUM.**

American Smelting & Refining Co., New York, N. Y.  
Marks Lissberger & Son, Inc., Long Island City, N. Y.

**CAISSONS, STEEL.**

Sealife, Wm. B. Sons Co., Pittsburgh, Pa.

**CALCIUM CARBIDE.**

Airco—Air Reduction Sales Co., New York, N. Y.  
Canada Carbide Sales Co., New York.  
Carbolite—American Carbolite Co., Duluth, Minn.  
Edgertine Aniline Corp., New York.  
Ohio Chemical & Mfg. Co., Cleveland, O.  
Speare's, Alden, Sons Co., The, Cambridge, Mass.  
Union Carbide Co., New York.

**CALCULATORS, RADIATION.**

Fromm, G. A., Brooklyn, N. Y.  
Gilson Slide Rule Co., Niles, Mich.  
Greenwood & O'Neill, Princeton, Ill.  
Perrigo, Harry B., New Haven, Conn.  
Simplex Steel Stamping & Mfg. Co., St. Louis, Mo.

**CALIPERS AND DIVIDERS.**

❖ Almond, T. R., Mfg. Co., Ashburnham, Mass.  
Bernz, Otto, Newark, N. J.  
Billings & Spencer Co., Hartford, Conn.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Columbia—Columbia Caliper Co., Marietta, Pa.  
Goodell-Pratt Co., Greenfield, Mass.  
Grove Indicating—Grove Mfg. Co., Dayton, Ohio.  
Indicating Calipers Co., New York, N. Y.  
Johnson, Wm., Newark, N. J.  
Knauf Tool Works, Rock Island, Ill.  
Peck, Stow & Wilcox Co., The, New York, N. Y.  
Reed Jr., Reed Micrometers—Reed Small Tool Works, Worcester, Mass.  
Rustless Rule—The Rustless Rule Co., Inc., Buffalo, N. Y.  
Starrett, Co., L. S., Althol, Mass.  
Union Tool Co., Orange, Mass.  
West Haven Mfg. Co., New Haven, Conn.

**CALIPERS, POCKET, SLIDE AND VERNIER.**

Smith & Egge Mfg. Co., The, Bridgeport, Conn.  
Starrett, Co., L. S., Althol, Mass.

**CALORIGRAPHES.**

Precision Instrument Co., Detroit, Mich.

**CALORIMETERS.**

Carpenter's—Schaefer & Budenberg Mfg. Co., The, Brooklyn (coal, steam).  
Ellison—Lewis M. Ellison, Chicago, Ill.  
Precision Instrument Co., Newark, N. J.  
Riche—Scientific Utilities Co., New York.  
Roland Wild—Precision Instrument Co., Newark, New Jersey.  
Sarco—The Sarco Co., Inc., New York, N. Y.  
Scimatco—Scientific Materials Co., Pittsburgh, Pa.  
Smith—Smith Gas Engineering Co., The, Dayton, O.  
Star—Star Brass Mfg. Co., Boston, Mass.

**CANDLES, FACTORY, PLUMBERS' AND MINERS'.**

American Crayon Co., Sandusky, Ohio.  
Baker, William T., Inc., Jersey City, N. J. (pedestal).  
Emerv Candle Co., The, Cincinnati, O.  
Excello, Union—Columbia Wax Works, New York, N. Y.  
Leading—Columbia Wax Works, New York, N. Y.  
St. Louis Candle & Wax Co., St. Louis, Mo.  
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

**CANDLES, LUBRICATOR.**

Faul, William J., New York, N. Y.

**CAN OPENERS AND CORK SCREWS.**

New England Novelty Works, Hill, N. H.  
Perfect, Ruby, Gold Tip—Fletcher-Terry Co., Forestville, Conn.  
Saal, H. G. Co., Chicago, Ill.

**CANS, ASH AND GARBAGE.**

American Can Co., New York, N. Y.  
Arrow Can Co., The, New York, N. Y.  
Bliss Co., E. W., Brooklyn, N. Y.  
Carco—Wheeling Corrugating Co., Wheeling, W. Va.

Columbian Steel Tank Co., Kansas City, Mo.  
Cream City—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Decatur Cornice & Roofing Co., Inc., Albany, Ala.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Dover Safety—Dover Stamping & Mfg. Co., Cambridge, Mass.  
Fitts—Frank F. Fitts Mfg. Co., Boston.  
G & G—Gillis & Geoghegan, New York, N. Y.  
Hygeia Can Co., Inc., New York, N. Y.  
Iron Horse—Rochester Can Co., Rochester, N. Y. (galvanized).  
Justrite Mfg. Co., Inc., New York, N. Y.  
Koven & Bro., L. O., Jersey City, N. J.  
Sexton Can Co., Boston, Mass.  
Sharp Rotary Ash Receiver Corp., Springfield, Mass.  
Steel Basket & Specialty Co., Cedar Rapids, Iowa.  
Stephenson Underground—C. H. Stephenson, Lynn, Mass.  
Superior Mfg. Co., The, Pittsburgh, Pa.  
Witt Cornice Co., Cincinnati, O.

**CANS, CEMENT HOLDING.**

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Safety Fire Extinguisher Co., The, New York, N. Y.

**CANS, ENGINEERS.**

Iron Horse—Rochester Can Co., Rochester, N. Y.

**CANS, GASOLINE, SUPPLY AND STORAGE.**

American Can Co., New York, N. Y.  
Arrow Can Co., New York, N. Y.  
Blanke Can & Mfg. Co., W. F., St. Louis, Mo.  
Conneaut Can Co., Conneaut, O.  
Delphos Mfg. Co., Delphos, O.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Eagle Manufacturing Co., Wellsburg, W. Va.  
Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Globe, Red Crown—W. H. McNutt, New York, N. Y.  
Globe—Garrison Brass & Machine Wks., New York.  
Iron Horse—Rochester Can Co., Rochester, N. Y.  
Justrite—The Justrite Co., Chicago, Ill.  
Lyon Metallic Mfg. Co., Aurora, Ill.  
McNutt Non-Explosive—McNutt Can Sales Co., New York, N. Y.  
Peerless—Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
Protection—Geo. W. Diener Mfg. Co., Chicago, Ill.  
Pyrene—Pyrene Mfg. Co., New York, N. Y.  
Queen—Harker Mfg. Co., Cincinnati, O.  
Rowe, A. C., & Son, Inc., New York.  
Safety Fire Extinguisher Co., The, New York.  
Sexton Can Co., Boston, Mass.  
P. Wall Mfg. Supply Co., N. S. Pittsburg, Pa.  
Wheeling—Wheeling Corrugating Co., Wheeling, W. Va.

**CANS, ICE.**

Electric Weld—Wood Mfg. Co., John, Conshohocken, Pa.

**CANS, MILK AND ICE CREAM.**

Cream City—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Electric Weld—Wood Mfg. Co., John, Conshohocken, Pa.  
Fouts, C. C. Co., Middletown, O.  
Sturgess & Burn Mfg. Co., Chicago, Ill.

**CANS, OIL STORING.**

Ansonia Novelty Company, Ansonia, Conn.  
Arrow Can Co., New York, N. Y.  
Berger Mfg. Co., Canton, O.  
Bernz, Otto, Co., Newark, N. J.  
Cream City—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Delphos—Delphos Mfg. Co., Delphos, O.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Easy Flow—Bumann Mfg. Co., Litchfield, Ill.  
Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Hall's—Hall Mfg. Co., New York, N. Y.  
Iron Horse—Rochester Can Co., Rochester, N. Y.  
Johnson Mfg. Co., Urbana, O.  
Kessler Safety Device Co., Chicago, Ill.  
Knapp Mfg. & Supply Co., New York, N. Y.  
Peerless—Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
Perfection—Handlan-Buck Mfg. Co., St. Louis, Mo.  
Sexton Can Co., Boston, Mass.  
Trithaway Bros., Parsons, Pa.  
W. & B.—Wilson & Bennett Mfg. Co., Chicago, Ill.  
Wheeling & Crescent—Wheeling Corrugating Co., Wheeling, W. Va.  
Whitaker Mfg. Co., The, Chicago, Ill.

**CANS, OIL SUPPLY AND CARRYING.**

Caretaker—Willcox Engineering Co., Saginaw, Mich.  
Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
Walters Mfg. Co., Pittsburgh, Pa.



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Barshal Company, Inc., Cleveland, O.  
Canton Art Metal Co., Canton, Ohio.  
Cleveland Wire Spring Co., The, Cleveland, O.  
Columbian Steel Tank Co., Kansas City, Mo.  
Corco—Wheeling Corrugating Co., Wheeling, W. Va.  
Delphos—Delphos Mfg. Co., Delphos, O.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Dover—Dover Stamping & Mfg. Co., Cambridge, Mass.  
Etna—The McClintock & Irvine Co., Pittsburg, Pa.  
Excelsior—Missouri Lamp Mfg. Co., St. Louis, Mo.  
Fitts—Frank E. Fitts, Mfg. Co., Boston.  
"G. P. F."—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
Justrite—The Justrite Mfg. Co., Chicago, Ill.  
Kirk & Blum Mfg. Co., Cincinnati, O.  
Koven, L. O. & Bro., Jersey City, N. J.  
Littlesford Bros., Cincinnati, O.  
Lyon Metallic Mfg. Co., Aurora, Ill.  
♦ Old Reliable—Geo. W. Diener Mfg. Co., Chicago, Ill.  
Ono Frezo Fire Extinguisher Mfg. Co., St. Louis, Mo.  
Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
Perfection—Geo. W. Diener Mfg. Co., Chicago, Ill.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
Pyrene—Pyrene Mfg. Co., New York.  
Queen—Harker Mfg. Co., Cincinnati, O.  
Rochester Can Co., Rochester, N. Y.  
Rowe, A. C., & Son, Inc., New York.  
Safety Fire Extinguisher Co., The, New York, N. Y.  
Sexton Can Co., Boston, Mass.  
Stephenson—C. H. Stephenson, Lynn, Mass.  
Steel Basket & Specialty Co., Cedar Rapids, Iowa.  
Underwriters—Handlan-Buck Mfg. Co., St. Louis, Mo.  
Wall, The P., Mfg. Supply Co., Pittsburgh, Pa.  
Walters Mfg. Co., Pittsburgh, Pa.  
Willcox—Willcox Engineering Co., Saginaw, Mich.

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Justrite Mfg. Co., Chicago, Ill.

**CANS, SHIPPING, FOR ALL USES.**

Conneaut Can Co., Conneaut, Ohio.

**CANS, TOTE, FOR FACTORY USE.**

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Kirk & Blum Mfg. Co., Cincinnati, O.  
Mullins Body Corp., Stamping Dept. A., Salem, O.

**CANS, TRUCK.**

Iron Horse—Rochester Can Co., Rochester, N. Y.

**CANS, BLASTING.**

Atlas Powder Co., Wilmington, Del.  
♦ Du Pont, E. I., De Nemours & Co., Wilmington, Del.  
Trade names—Du Pont, Gold Medal, Metallic, Silver Medal.

Equitable Powder Mfg. Co., East Alton, Ill.  
Hercules Powder Co., Wilmington, Del. (Electric).

**CAPS, DRIVE, WELL CASING.**

Chicago Well Supply Co., Chicago, Ill.  
N. T. C.—National Tube Co., Pittsburgh, Pa.  
Pittsburgh Valve & Fittings Co., Barborton, O.

**CAPS AND PERBULES, FUSE.**

Waterbury Mfg. Co., Waterbury, Conn.

**CAPS, FULLER BALL.**

Ayling & Reichert Co., Toledo, O.  
Frank Bros., New York, N. Y.  
Woodward-Wanger Co., Philadelphia.

**CAPS, ROSE.**

(See "Fittings, Hose.")

**CAPS, PIPE, BRASS.**

(See also "Fittings, Brass Pipe.")

Acheson Mfg. Co., Braddock, Pa.  
Cahill Mfg. Co., Worcester, Mass.  
Exeter Brass Works, Exeter, N. H.  
Haydenville Co., The, Haydenville, Mass.  
♦ Kelly & Jones Co., Greensburg, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
♦ McEae & Roberts Co., The, Detroit, Mich.  
National Brass Mfg. Co., Rochester, N. Y.  
N. T. C.—National Tube Co., Pittsburgh, Pa.  
Pittsburg Valve & Fittings Co., Barborton, O.  
♦ Powell Co., The Wm., Cincinnati, O.  
Richardson Brass Co., Edro, Baltimore, Md.  
♦ Walworth Mfg. Co., Boston, Mass.  
Will & Baumer Co., Syracuse, N. Y.  
Wolverine Brass Works, Grand Rapids, Mich.

**CAPS, PIPE, IRON.**

C—Crane Co., Chicago, Ill.  
Essex Foundry, Newark, N. J.  
Guilderland Foundry Co., Guilderland, N. Y.  
K—Kuhns Bros., Dayton, O.  
McNab & Harlin Mfg. Co., New York, N. Y.  
National Brass Mfg. Co., Rochester, N. Y.  
N. T. C.—National Tube Co., Pittsburgh, Pa.  
Newbury, Jay H. & Son, Goshen, N. Y.  
Newbury Mfg. Co., Monroe, N. Y.  
Pittsburg Valve & Fittings Co., Barborton, O.  
♦ Ravena, Iron Co., Ravena, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.

**CAPS, ROOFING.**

Heartley Machine, Variety Iron & Tool Works, Toledo, O.

**CAPS, VENT, SOIL PIPE.**

Advance Gem—Zurn Mfg. Co., Erie, Pa.  
Bicalky Fan Co., Buffalo, N. Y.  
Buffalo—Zero Valve & Brass Mfg. Co., Buffalo, N. Y.  
Connor, M. A., Lockport, N. Y.  
Dehn's Acme—Compound Injector & Specialty Co., Chicago.  
Essex Foundry, Newark, N. J.  
Flush Climax—Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
Guilderland Foundry Co., Guilderland, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
H. D. W.—Zero Valve & Brass Mfg. Co., Buffalo, N. Y.  
Lehigh—Hersh Brothers Co., Allentown, Pa.  
Mechanicville Specialty Supply Mfg. Co., Mechanicville, N. Y.  
Modern Iron Works, Quincy, Ill.  
Park & McKay Co., Detroit, Mich.  
Sanitary Company of America, Linfield, Pa.  
Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
Wolverine Foundry Co., Detroit, Mich.

**CAPS FOR VISE JAWS.**

Bingham—Prentiss Vise Co., New York, N. Y.

**CAPSTANS, ELECTRIC.**

Maine Electric Co., Portland, Me.  
Mundy Holsting Engine Co., J. S., Newark, N. J.

**CAPSTANS, STEAM OR HAND.**

American—American Engineering Co., Philadelphia, Pa.  
American Ship Windlass Co., Providence, R. I.  
Chase Machine Co., The, Cleveland, O.  
Curtiss—H. J. Curtiss Co., New York, N. J.  
Dake Engine Co., Grand Haven, Mich.  
Flory Mfg. Co., South Bangor, Pa.  
Lenher Engineering Co., New York, N. Y.  
Marine Iron Works, Chicago, Ill.

Marine Mfg. & Supply Co., New York, N. Y.  
Street Brothers Machine Wks., Chattanooga, Tenn.

#### CARBON PRODUCTS FOR ALL PURPOSES

Speer Carbon Co., St. Marys, Pa.

#### CARBONATORS, ELECTRIC, HAND AND WATER.

Wittmann Company, The., Buffalo, N. Y.

#### CARBURETERS, GASOLINE AND OIL.

- A. W. T.—American Watch Tool Co., Waltham, Mass.
- ♦ Ball & Ball—Penberthy Injector Co., Detroit, Mich.
- Economy—Economy Gas Machine Co., Rochester, N. Y.
- Lockfelholz Co., Milwaukee, Wis.
- Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.
- ♦ Stewart—Detroit Lubricator Co., Detroit, Mich.

#### CARBURETERS, POWDERED COAL.

Grindle—Grindle Fuel Equipment Co., Chicago, Ill.  
Pruden—Powdered Coal Engineering & Equipment Co., Chicago, Ill.

#### CARDS OR CLEANERS, FILE.

(See "Brushes and Cards, File Cleaning.")

#### CARRIAGES, SAW MILL.

(See also "Machinery, Sawmill.")

- Diamond Iron Works, Minneapolis, Minn.
- ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.

#### CARRIAGES, TENSION, ROPE DRIVE.

(See also "Machinery, Power Transmission.")

- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- Link-Belt Company, Chicago and Philadelphia.
- Meese & Gottfried Co., San Francisco, Cal.
- Nordyke & Marmon Co., Indianapolis, Ind.
- Pyott, Geo. W., Co., The, Chicago, Ill.
- Sprout, Waldron & Co., Muncy, Pa.
- ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

#### CARRIERS, BUCKET AND PAN.

(See also "Machinery, Elevating and Conveying.")

- Jeffrey Mfg. Co., Columbus, O.
- Peck Carrier—Link-Belt Company, Chicago, Ill.
- Stephens-Adamson Mfg. Co., Aurora, Ill.
- ♦ Webster Mfg. Co., Chicago, Ill.

#### CARRIERS, CLAMPS, FOR WOODWORKERS.

Taylor, James L., Mfg. Co., Poughkeepsie, N. Y.

#### CARRIERS, OVER-HEAD.

American Steam Conveyor Corp., Chicago, Ill.  
Aurora—Aurora Door Hanger & Specialty Co., Aurora, Ill.  
Columbian—J. E. Porter Corp., Ottawa, Ill.  
Conveyors Corporation of America, Chicago, Ill.  
Louden Machinery Co., Fairfield, Ia.  
Richards-Wilcox Mfg. Co., Aurora, Ill.  
Williams Machine Co., Poultney, Vt.

#### CARS, BARROWS, BUGGIES, WAGONS AND TRUCKS, CUPOLA CHARGING.

Biehl Iron Works, Inc., Reading, Pa.  
Chase Fdy. & Mfg. Co., Columbus, O.  
Columbiana Boiler Co., Columbiana, O.  
Conveying Machine Co., New York, N. Y.  
Hunt Co., C. W., West New Brighton, N. Y.  
Industrial Car Co., West Park, O.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lakewood—The Lakewood Engineering Co., Cleveland Ohio.  
Pennsylvania Engineering Wks., New Castle, Pa.  
Phillips Doup and Co., Inc., Brooklyn, N. Y.  
Russell Wheel & Foundry Co., Detroit, Mich.  
Whiting Foundry Equipment Co., Harvey, Ill.  
Youngstown Car Mfg. Co., Youngstown, O.

#### CARS, BRICK DRYING.

A. C. Co.—Arnold-Creager Co., The, New London, O.  
Chase Fdy. & Mfg. Co., Columbus, O.  
Globe—Globe Machinery Supply Co., Des Moines, Ia.

#### CARS, BRICK AND TILE.

Lakewood Engineering Co., Cleveland, O.

#### CARS, CORE OVEN.

- Biehl Iron Works, Inc., The, Reading, Pa.
- Central Foundry Supply Co., Columbus, O.
- Chase Fry. & Mfg. Co., Columbus, O.
- Monarch, Simplex—Monarch Engineering & Mfg. Co., Baltimore, Md.
- ♦ Ohio Body & Blower Co., Cleveland, Ohio.

#### CARS, DERRICK, RAILWAY WRECKING.

Gregg Co., Ltd., Hackensack, N. J.  
Mitchell—American Equipment Co., Norristown, Pa.  
United Iron Works Co., Springfield, Mo.

#### CARS, DUMP.

A. C. Co.—Arnold-Creager Co., The, New London, O.  
Biehl Iron Works Co., The, Reading, Pa.  
Conco—H. D. Conkey & Co., Mendota, Ill.  
Continental Car Co. of America, Louisville, Ky.  
Gregg Co., Ltd., Hackensack, N. J.  
International Clay Machinery Co., Dayton, Ohio.  
Kilbourne & Jacob Mfg. Co., Columbus, Ohio.  
Lakewood Engineering Co., Cleveland, O.  
Link-Belt Company, Chicago and Philadelphia.  
Sanford-Day Iron Works, Knoxville, Tenn.  
Streich, A. & Bro. Co., Oshkosh, Wis.  
Zelnicker Supply Co., Walter A., St. Louis, Mo.

#### CARS, HAND AND PUSH, RAILWAY.

Fairmont Gas Engine & Railway Motor Car Co., Fairmont, Minn.  
Kalamazoo Railway Supply Co., Kalamazoo, Mich.

#### CARS, INDUSTRIAL RAILWAY.

American Clay Machinery Co., Bucyrus, O.  
Archer—Archer Iron Works, Chicago, Ill.  
Atlas Car & Mfg. Co., Cleveland, O.  
Biehl Iron Works, Inc., The, Reading, Pa.  
Chase Foundry & Mfg. Co., Columbus, O.  
Continental Car Co. of America, Louisville, Ky.  
Gregg Co., Ltd., Hackensack, N. J.  
Hill & Griffith Co., The, Cincinnati, O.  
Hunt Co., C. W., West New Brighton, N. Y.  
Imperial—Pratt Engineering & Machine Co., Atlanta, Ga.  
Inaley Mfg. Co., Indianapolis, Ind.  
International—International Clay Machinery Co., Dayton, Ohio.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Kalamazoo—Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Koppel Industrial Car & Equipment Co., Koppel, Pa.  
Lakewood—Lakewood Engineering Co., Cleveland, O.  
Lancaster Iron Works, Inc., Lancaster, Pa.  
Lansing Co., Lansing, Mich.  
Link-Belt Company, Chicago and Philadelphia.  
Northwestern Motor Co., Eau Claire, Wis.  
Oliver Air Pump—W. J. Oliver Mfg. Co., Knoxville, Tenn.  
Pressed Steel Car Co., Pittsburgh, Pa.  
Russell Wheel & Fdy. Co., Detroit, Mich.  
Sackett Screen & Chute Co., Chicago, Ill.  
Scottdale—Scottdale Machine & Mfg. Co., Scottdale, Pa. (mine and slate).  
Smith—The T. S. Smith Co., Milwaukee, Wis.  
Steele & Sons, J. C., Statesville, N. C. (clay and stone).  
Tread-Kill—M. H. Treadwell Co., New York, N. Y. (Cinder and hot metal.)  
United Iron Works Co., Kansas City, Mo.  
Watts Mining Car Wheel Co., The, Barnesville, Ohio  
Weimer—Weimer Machine Works Co., Lebanon, Pa.  
Western Wheeled Scraper Co., Aurora, Ill.  
Whiting Foundry Equipment Co., Harvey, Ill.  
Wiener, Ernst, New York, N. Y.  
Zelnicker Supply Co., Walter A., St. Louis, Mo.

#### CARS, LOGGING.

American Car & Foundry Co., St. Louis, Mo.  
Barbey & Smith Car Co., Dayton, O.  
Chase Foundry & Mfg. Co., Columbus, O.  
Chattanooga Car & Foundry Co., Chattanooga, Tenn.  
Climax Mfg. Co., Corry, Pa.  
Continental Car & Equipment Co., New York.  
Dille Fdy. Co., Pine Bluff, Ark.  
Erie Car Wks., Erie, Pa.  
Gregg Co., Ltd., Hackensack, N. J.  
Helmick Fdy. & Machine Co., Fairmont, W. Va.  
Holt Mfg. Co., Stockton, Cal.  
Lima Locomotive & Machine Co., Lima, O.  
Magor Car Co., New York, N. Y.  
Marshall Car Wheel & Fdy. Co., Marshall, Tex.  
Raleigh Iron Wks. Co., Columbus, O.  
Ramapo Iron Wks., Hillburn, N. Y.  
Sheffield Car Co., Three Rivers, Mich.  
Union Iron Works Co., Selma, Ala.

#### CARS, RAILWAY SECTION, HAND.

Mudge & Company, Chicago, Ill.

#### CARS, RAILWAY, SECTION, GASOLINE.

Buda—The Buda Co., Chicago, Ill.  
Casey Jones—Northwestern Motor Co., Eau Claire, Wis.  
♦ Fairbanks, Morse & Co., Chicago, Ill.  
Fairmont Gas Engine & Railway Motor Car Co., Fairmont, Minn.  
Jerry Boy—Associated Mfrs., Waterloo, Ia.  
Kalamazoo—Kalamazoo Ry. Supply Co., Kalamazoo, Mich.  
Mudge—Mudge & Co., Chicago, Ill.  
Northwestern Motor Co., Eau Claire, Wis.  
Road Boss—North American Engine Co., Algona, Ia.  
Salisbury Fdy. & Machine Co., Salisbury, Md.  
Sumner Engine Co., Fairmont, Minn. (engine only).

**CARS, SCOOP, AND ROAD BUILDERS.**  
Biehl Iron Works, Inc., Reading, Pa.

**CARS, TRANSFER.**

Chase Fry & Mfg. Co., Columbus, O.  
Gillette—Gillette Roller Bearing Co., Grand Rapids, Mich.  
Globe—Globe Machinery & Supply Co., Des Moines, Iowa.  
Gregg Co., Ltd., Hackensack, N. J.  
North Coast Dry Kiln Co., Seattle, Wash.

**CARTRIDGES, DYNAMITE.**

♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.

**CARTS, CONCRETE.**

Akron—Akron Barrow Co., Cleveland, O.  
Biehl Iron Works, Inc., Reading, Pa.  
Boss—American Cement Machine Co., Inc., Keokuk, Iowa.  
Chattanooga Wheelbarrow Co., Chattanooga, Tenn.  
Doup, Phillips Co., Brooklyn, N. Y.  
Insley Mfg. Co., Indianapolis, Ind.  
Jackson Mfg. Co., Harrisburg, Pa.  
Keystone—Gray Iron Foundry Co., Reading, Pa.  
Kilbourne & Jacobs Mfg. Co., The, Columbus, O.  
Lakewood Engineering Co., Cleveland, O.  
Lansing Co., Lansing, Mich.  
Neversink—Biehl Iron Works, Inc., The, Reading, Pa.  
Sterling Wheelbarrow Co., West Allis, Wis.  
Toledo Wheelbarrow Co., Toledo, Ohio.

**CARTS, CONTRACTORS, DUMP.**

Kilbourne & Jacob Mfg. Co., Columbus, O.

**CARTS, FERTILIZER.**

Lansing Co., Lansing, Mich.

**CARTS, HAND.**

Chattanooga Wheelbarrow Co., Chattanooga, Tenn.  
♦ Fairbanks-Morse & Co., Chicago, Ill.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lansing Co., Lansing, Mich.  
Monitor—Merrimac—F. J. Aubeuf Co., Inc., Oneida, N. Y.  
Oshkosh Logging Tool Co., Oshkosh, Wis. (dump).  
Stretch, A. & Bro., Co., Oshkosh, Wis.  
Triumph, Mascot, Export—Swartwout Mfg. Co., Clinton, N. Y.  
Zering Mfg. Co., H., Cincinnati, O.

**CARTS, HOSE.**

Cliff & Guilbert Co., New York, N. Y.  
Hayward & Co., S. F., New York, N. Y.  
Larkin—Larkin Mfg. Co., Dayton, O.  
Miller—Miller Chemical Engine Co., Chicago, Ill.  
Oberchain & Boyer, Logansport, Ind.  
Pirsch, Peter, & Sons Co., Kenosha, Wis.  
Volunteer—American Fire Apparatus Co., New York, N. Y.  
Wirt & Knox Mfg. Co., Philadelphia, Pa.

**CARTS, PICKUP.**

Lansing Co., Lansing, Mich.

**CASES, BOLT, SECTIONAL, BALL BEARING.**

Wellston Mfg. Co., The, Wellston, O.

**CASES, DRILL (FOR SUPPLY HOUSES).**

♦ Whitman & Barnes Co., The, Akron, O.

**CASING, BOILER.**

Casey-Hedges Co., Chattanooga, Tenn.  
Muskegon Boiler Works, Muskegon, Mich.

**CASING HOSE, FLEXIBLE METALLIC.**

Federal Metal Hose Corp., Buffalo, N. Y.

**CASING, INSERTED JOINT.**

Byers—A. M. Byers Co., Pittsburg, Pa.  
National—National Tube Co., Pittsburg, Pa.

**CASING, STEAM PIPE.**

(See "Covering, Wood, for Steam Pipe.")

**CASING OR TUBING, WELL.**

Byers Co., A. M., Pittsburg, Pa.  
Central Tube Co., Pittsburg, Pa.  
Dempster—Dempster Mill Mfg. Co., Beatrice, Neb. (galvanized sheet steel).  
♦ La Belle Iron Works, Steubenville, O.  
M—Monongahela Tube Co., Pittsburg, Pa.  
♦ Mark Mfg. Co., Chicago, Ill.  
National—National Tube Co., Pittsburg, Pa.  
Oil Well Supply Co., Pittsburg, Pa.

Perfection—Felter Bros. Mfg. Co., Marshfield, Wis.  
Reading Iron Co., Reading, Pa.  
South Chester Tube Co., Chester, Pa.  
Western Pipe & Steel Co., Los Angeles, Cal.  
Wheeling Steel Corp., Wheeling, W. Va.  
♦ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, O.

**CASINGS, ELEVATOR, STEEL & WOOD.**

Caldwell, H. W., & Son Co., Chicago, Ill.  
Link-Belt Company, Chicago and Philadelphia.

**CASINGS AND CABINETS, RADIATOR.**

Capitol—U. S. Radiator Corp., Detroit, Mich.  
Padgett—Wooden Ventilator Co., East Palestine, O.  
Penn—Pennsylvania Furnace & Stove Co., Warren, Pa.  
Wooden Ventilator Co., The, East Palestine, Ohio.

**CASINGS, MOLD, FOUNDRY.**

Buch Foundry Equipment Co., York, Pa.

**CASTERS, LEATHER.**

Barwood—The L. J. Barwood Co., Stoneham, Mass.

**CASTERS, STOVE.**

Gem and Ruby—The Bassick Co., Bridgeport, Conn.

**CASTERS, TRUCK.**

(See "Wheels, Truck.")

**CASTINGS, SEWER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Central Foundry Co., New York, N. Y.  
Charlotte Pipe & Foundry Co., Charlotte, N. C.  
Clark—H. W. Clark Co., Mattoon, Ill.  
Columbian Iron Works, Chattanooga, Tenn.  
Drummond & Co., M. J., New York, N. Y.  
Elkhart Fdy. & Machinery Co., Elkhart, Ind.  
Fuller Iron Works Co., The, Providence, R. I.  
Indiana Foundry Co., Indiana, Pa.  
Lynchburg Foundry Co., Lynchburg, Va.  
McDonald & Co., H. W., Gallion, Ohio.  
Modern Iron Works, Quincy, Ill.  
Reading Foundry & Sup. Co., Reading, Pa.  
Red Wing Iron Works, Red Wing, Minn.  
South Bend Foundry Co., South Bend, Ind.  
Stuart Fdy. Co., Detroit, Mich.  
Thacher—Thacher Propeller & Foundry Corp., Albany, N. Y.  
Toronto Foundry & Machine Co., Inc., Toronto, O.  
Treaty Co., The, Greenville, O.  
Valley Machine Co., Parkersburg, W. Va.

**CASTORS, VENEER PRESS.**

Elmes, Charles F., Engineering Works, Chicago, Ill.

**CATALOGS COMPILED AND PRINTED.**

Cunco-Henneberry Co., The, Chicago, Ill.  
♦ Donnelley, R. R., & Sons Co., Chicago, Ill.  
Wynkoop, Hallenbeck, Crawford Co., New York.

**CATCH BASINS, CAST IRON, BLOW-OFF, GRAVEL AND DRAINAGE.**

Acme—Compound Injector & Specialty Co., Chicago, Ill.  
Economy Pumping Machinery Co., Chicago, Ill.  
Elkhart—Elkhart Iron Works, Elkhart, Ind.

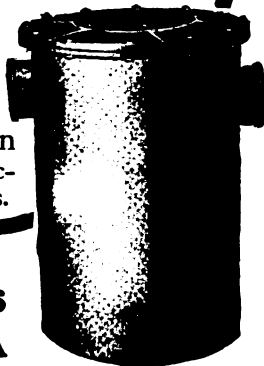
**CATCH BASINS, SEWER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Asheville Supply & Foundry Co., Asheville, N. C.  
Barber Mfg. Co., The, Ashtabula, O.  
Canton Foundry & Machine Co., The, Canton, O.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Central City Iron Works, Stevens Point, Wis.  
Clark, H. W. Co., Matton, Ill.  
Connecticut Electric Steel Co., Inc., Hartford, Conn.  
Clow & Sons, James B., Chicago, Ill.  
Concord—Concord Foundry Co., Concord, N. H.  
Dehn's Acme-Compound Injector & Specialty Co., Chicago, Ill.  
Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
Eddy Foundry Co., R. M., Chicago, Ill.  
Elkhart—Elkhart Iron Works, Elkhart, Ind.  
Estabrook—R. Estabrook's Sons, South Boston, Mass.  
Fee & Mason Mfg. Co., New York, N. Y.  
G. G.—George Gross, Rockaway Beach, L. I.  
Haines, Jones & Cadbury Co., Philadelphia.  
Hoffmann Mfg. Co., E., Milwaukee, Wis.  
Illinois Malleable Iron Co., Chicago, Ill.  
McDonald Foundry Co., Columbus, O.  
Monmouth Clay Mfg. Co., Monmouth, Ill.  
Mott Iron Works, The J. L., Trenton, N. J.  
Murphy—Murphy Specialty Co., Milwaukee, Wis.  
New York Central Iron Works Co., Inc., Hagerstown, Md.

# "THE ELKHART"

**ELKHART**  
Cast Iron Blow-Off,  
Gravel and Drainage  
Catch Basins in any depths  
from 16" to 60" diameters.  
Inlet, Outlet and Vapor Vent in any  
size and location, in accordance with  
Customer's requirements.

Will be pleased to  
submit prices on  
Special construc-  
tion or Extra  
Heavy Basins on  
receipt of spec-  
ifications.



**Elkhart Iron Works**  
**ELKHART - INDIANA**

Reinforced Concrete Pipe Co., Jackson, Mich.  
Thacher—Thacher Propeller & Foundry Corp., Al-  
bany, N. Y.  
Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.

## CATCHERS, TUBING, OIL WELL.

Dunn Mfg. Co., Oxnard, Cal.

## CEMENT, ACID RESISTING AND MASTIC.

Armstrong Co., The, Detroit, Mich.

## CEMENT, ASBESTOS AND MAGNESIA FOR BOILERS AND FURNACES.

American Seal—Connors Paint Mfg. Co., The William,  
Troy, N. Y.  
Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Atlas Co., The, Lincoln, N. J.  
Atlas Mineral Products Co., The, Mertztown, Pa.  
Brickline Fireite J. M. Acid Proof—Jorns-Manville,  
Inc., New York.  
Camco—Chicago Asbestos Mfg. Co., Chicago, Ill.  
Capitol, Triton—U. S. Radiator Corp., Detroit, Mich.  
Carey—The Philip Carey Mfg. Co., Cincinnati, O.  
Central—Central Asbestos & Magnesia Co., Chicago,  
Ill.  
Chicago Fireproof Covering Co., Chicago, Ill.  
Clinton Metallic Paint Co., Clinton, N. Y.  
Colebrook—Colebrook's Sons, W. H., Syracuse, N. Y.  
Crawford Asbestos Co., L. M., Denver, Colo.  
Crown—W. H. Colebrook's Sons, Syracuse, N. Y.  
Dambabbit, Tharco—The Armstrong Co., Detroit,  
Mich.  
Detroit—C. Stanley Morgan, Detroit, Mich.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Dominion—Dominion Asbestos and Rubber Corp., New  
York.  
Durobestos—Albion Mfg. Co., Seattle, Wash.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
Eureka—The Otley Paint Mfg. Co., Chicago, Ill.  
Fix-It—W. H. Colebrook's Sons, Syracuse, N. Y.  
Flex-Bestos—Lehon Co., The, Chicago, Ill.  
Franklin Mfg. Co., Franklin, Pa.  
Garco—General Asbestos & Rubber Co., Charleston,  
S. C.  
Glidden Co., The, Cleveland, O.  
Jack Corp., A. W., Lockport, N. Y.  
J-M High Temperature—Johns-Manville, Inc., New  
York, N. Y.  
♦ K. & M.—Kearbey & Mattison Co., Ambler, Pa.  
Mikesell Brothers Co., Chicago, Ill.

Noporo—Metalskin Co., Inc., Rochester, N. Y.  
Norristown Magnesia & Asbestos Co., Norristown, Pa.  
Pecora—Pecora Paint Co., Philadelphia, Pa.  
Pyro—Geo. W. Pitkin Co., Benton Harbor, Mich.  
R. M. C.—Richards Mfg. Co., Grand Rapids, Mich.  
Sail Mountain Co., Chicago, Ill.  
Sealite—L. A. Lux Co., Cleveland, Ohio.  
Security—Midland Asbestos & Mfg. Co., Kansas City.  
Standard Asbestos Co., Chicago, Ill.  
Standard Chemical Corp., Kalamazoo, Mich.  
Union Asbestos & Rubber Co., Chicago, Ill.  
Union Rubber & Asbestos Co., Trenton, N. J.  
Vitrex—Johns-Manville, Inc., New York, N. Y.  
Watson Co., H. F., Erie, Pa.  
Western Asbestos & Mfg. Co., Denver, Colo.

## CEMENT, ASPHALT.

Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Bramco—Baltimore Roofing & Asbestos Mfg. Co.,  
Asbestos, Md.  
National Roofing Co., Tonawanda, N. Y.  
Paria—Warren Chemical, Div. The Barrett Co., New  
York.

## CEMENT, BAKING, GLAZING, GREENHOUSE, SKY- LIGHT.

Federal—Federal Process Co., Cleveland, Ohio.

## CEMENT, BELT.

♦ Alexander—Alexander Bros., Philadelphia, Pa.  
Alpha—The Ulmer Leather Co., Norwich, Conn.  
Apex—W. H. Salisbury & Co., Chicago, Ill.  
Aqua—S. R. Sikes Co., Minneapolis, Minn.  
Balata—Victor-Balata & Textile Belting Co., New  
York, N. Y.  
Bickford & Francis Belting Co., Buffalo, N. Y.  
♦ Bradford—Bradford Belting Co., Cincinnati, O.  
C C C—Corliss Supply Co., St. Louis, Mo.  
Chicago Belting Co., Chicago, Ill. Trade names—  
Reliance, Sea Lion.  
Chicago Rawhide Mfg. Co., Chicago, Ill.  
♦ Clean Quality—Charlotte Leather Belting Co., Char-  
lotte, N. C.  
♦ Cocheco—T. B. Williams & Sons, Dover, N. H.  
Detroit Oak Belting Co., Detroit, Mich.  
DuPont Chemical Works, New York, N. Y.  
♦ Dux-Bak—Chas. A. Schieren Co., New York.  
♦ Eagle Counter & Leather Co., Cincinnati, O.  
Emral—Ulmer Leather Co., Norwich, Conn.  
Eternity—Burr Oak Belting Co., Cincinnati, O.  
Flex-O—Cross Bros. Co., Inc., Rochester, N. Y.  
Friedrich Belting Co., St. Louis, Mo.  
Hippo, U. S.—Reed & Duecker, Memphis, Tenn.  
Hold Fast—George Callahan & Co., New York, N. Y.  
♦ Hoyt—Edward R. Ladlew Co., Inc., New York, N. Y.  
Hy-Test—L. G. Isaacson Co., Inc., Aberdeen, Wash.  
International Smokeless Powder & Chemical Co.,  
New York.  
♦ Jewell—Jewell Belting Co., Hartford, Conn.  
Laurence, A. C., New York, N. Y.  
Leather-to-Metal—F. Ranville Co., Grand Rapids,  
Mich.  
Leather Preserver Mfg. Co., Chicago, Ill.  
Le Page's—Russia Cement Co., Gloucester, Mass.  
L X—Manufacturers Belt Hook Co., Chicago, Ill.  
♦ Marine—McCauley Belting Co., Chicago, Ill.  
♦ Martin's—International Glue Co., Boston, Mass.  
Minute—Oleum Products Co., Scranton, Pa.  
Mohegan—Ulmer Leather Co., Norwich, Conn.  
♦ Monarch—The Bradford Belting Co., Cincinnati, O.  
Mulconroy Co., Inc., Philadelphia, Pa.  
Mystic—International Glue Co., East Boston, Mass.  
♦ Neptune—Graton & Knight Mfg. Co., Worcester,  
Mass.  
Old Reliable—Ellert Mfg. Co., C. H., Evansville, Ind.  
♦ Page Belting Co., Concord, N. H.  
Palmer's Perfect—N. Palmer & Co., Bridgeport, Conn.  
♦ Neptune—The Graton & Knight Mfg. Co., Worcester,  
Mass.  
Quick Ser. Submarine—Holyoke Belting Co.,  
Holyoke, Mass.  
Rahman & Co., George, New York, N. Y.  
Ranville—F. Ranville Co., Grand Rapids, Mich.  
Reinhold Belting & Supply Co., Brooklyn, N. Y.  
♦ Reliance, Sea Lion—Chicago Belting Co., Chicago,  
Ill.  
Rhoads, J. E., & Sons, Philadelphia.  
♦ Royal Worcester—Graton & Knight Mfg. Co., Worces-  
ter, Mass.  
♦ Schieren's—Chas. C. Schieren & Co., New York.  
(Regular or waterproof.)  
Seal—W. H. Salisbury & Co., Inc., Chicago, Ill.  
♦ Shield—McCauley Belting Co., Chicago, Ill.  
Shultz Belting Co., St. Louis, Mo.  
Star—F. Ranville Co., Grand Rapids, Mich. (not  
waterproof).  
Steer—Joseph Meier's Sons, Newark, N. J.  
Stickfast—MacWatty Belting Co., Providence, R. I.  
Superior—Grand Rapids Belting Co., Grand Rapids,  
Mich.  
Ulmer's Alpha, Ulmer's Ulco., Ulmer's Mohegan—  
The Ulmer Leather Co., Norwich, Conn.



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Who Have Had  
**EXPERIENCE**  
With It  
Now Handle It  
**EXCLUSIVELY**  
**It Builds Permanent Business**

- ◆Victor—New York Leather Belting Co., New York.  
Warren—Warren Belting Co., Worcester, Mass.  
Wateride—F. Ranville Co., Grand Rapids, Mich.  
Waterproof—Grand Rapids Belting Co., Grand Rapids, Mich.  
Webb Bros. Belting Co., Kansas City, Mo.  
◆Wetite—New York Leather Belting Co., New York.

#### CEMENT, BOILER FRONT.

- Archnu—Laclede-Christy Clay Products Co., St. Louis, Mo.  
Atlas M. & M. Co., The, Lincoln, N. J.  
Bestix—Jos. W. Hays Corp., Michigan City, Ind.  
Federal—The Federal Process Co., Cleveland, O.  
Frazer—Frazer Paint Co., Detroit, Mich.  
Hosmers—G. A. Hosmer Co., Buffalo, N. Y.

#### CEMENT, DISC WHEEL.

- Gardner—Gardner Machine Co., Beloit, Wis.  
Helmet—Chas. H. Besly & Co., Chicago, Ill.  
Walls, T. P., Tool & Supply Co., Inc., New York.

#### CEMENT, FIRE BRICK.

- Furnaseal—Laclede-Christy Clay Products Co., St. Louis, Mo.  
Hytemplate—Quigley Furnace Specialties Co., New York.  
Inferno—Codd Tank & Specialty Co., Baltimore, Md.  
Protectocoat—Standard Chemical Corp., Kalamazoo, Mich.  
Sil-O-Cel—Celite Products Co., Chicago, Ill.  
Vacuum—The Klein Mfg. Co., Cleveland, O.

#### CEMENT, GASFITTERS' (bar form).

- Chamberlain & Johnson, Pittsburgh, Pa.  
Insulative Co., New York, N. Y.

#### CEMENT, GLASS AND MARBLE.

- Frazer—Frazer Specialty Co., Detroit, Mich.  
Hosmer—G. A. Hosmer Co., Buffalo, N. Y.

#### CEMENT, HIGH TEMPERATURE.

- The Buckeye Products Co., Cincinnati, Ohio.  
Johns-Manville, Inc., New York, N. Y.  
Kolorite—Oleum Products Co., Scranton, Pa.  
Sil-O-Cel—Celite Products Co., Chicago, Ill.

#### CEMENT, INSULATING, THERMAL.

- Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Sil-O-Cel—Celite Products Co., Chicago, Ill.

#### CEMENT (AND FILLER) FOR IRON AND STEEL.

- Cooper's—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
Diamond—Diamond Expansion Bolt Co., New York, N. Y.  
Eureka—The Otley Mfg. Co., Chicago, Ill.  
Fill-In—J. W. Paxson Co., Philadelphia, Pa.  
Goetze's—Goetze Gasket & Packing Co., New Brunswick, N. J.  
Harrison Bros., Inc., Amesbury, Mass.  
Holtite—The Strong Machinery & Supply Co., New York.  
Johns-Manville, Inc., New York. Trade names—Leak-No-Ferro.  
McLeod & Henry Co., Troy, N. Y.  
Metaloid—Strong Machinery & Supply Co., New York.  
Norwesco—The Northwestern Chemical Co., Marietta, O.  
Paxson Co., J. W., Philadelphia, Pa.  
Pecora Paint Co., Philadelphia, Pa.  
Rice's—United States Gutta Percha Paint Co., Providence, R. I.

## RED CROSS COMPOUND

makes

### PERFECT PIPE-JOINTS

WHEN we placed Red Cross Compound on the market in 1903; nobody wanted it, and but few would listen to our story of its merits. We knew what we had, what it would do, and that it was needed. Its merits were made known—not by intensive advertising or persistent salesmanship, but by actual demonstration and having users test it in comparison with any material which they had regarded as the best.

Its growth was slow at first but rapidly increased as its merits became known and for years it has been in use from the Atlantic to the Pacific, on the most difficult and trying work, and in many instances has produced perfect work where other materials have failed. It is ready to use when we send it out, never skins over in the can, or hardens in the joint, and with its many merits it is cheaper to use than leads. If you will give it a trial on your difficult work you will be convinced that it is the material you should use.

Among leading users of Red Cross Compound we cite:—Penna. R. R. at 23 shops and locomotive works; U. S. Steel, at 17 plants; Standard Oil Co.; U. S. Rubber Co.; Blake & Knowles, Dean, Laidlaw, and Worthington Pumps; General Fire Extinguisher Co.; Union Switch & Signal Co.; Busch-Sulzer Bros.—Diesel Engine Co.; National Boiler Washing Co.; Ruud, and Hoffman, Automatic Heaters.

Some of the above have used Red Cross for over eleven years. Not one has ceased to use it. In the jobbing trade, we have the largest and best houses in the country. Some of them have sold Red Cross Compound for 17 years, and we have never lost the trade of a single jobbing house who has taken up its sale.

#### OUR LIBERAL OFFER

We will send you a sample can of Red Cross Compound free of charge and postage paid. Test it yourself, in your own way, on some trying job and you will then know its value. Don't put this off—send a postal NOW.

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Cuyahoga Falls,

Ohio, U. S. A.

- Royalute, Royal, Stick-To-Iron—The A. Wilhelm Co., Reading, Pa.  
Shelton—Clark Cast Steel Cement Co., Shelton, Conn.  
Smooth-On—Smooth-On Mfg. Co., Jersey City, N. J.  
Steamtite—The Clark Cast Steel Cement Co., Shelton, Conn.  
Three Horse Brand—John Balzley Iron Works, Philadelphia, Pa.

#### CEMENT, MARINE.

- Pecora—Pecora Paint Co., Philadelphia, Pa.

#### CEMENT, OIL AND GASOLINE PROOF.

- Gasolla—Federal Process Co., Cleveland, O.

#### CEMENT (OR COMPOUND) PIPE JOINT, PLUMBERS', GAS AND STEAMFITTERS'.

- Aluminum Elastic—A. Wilhelm Co., Reading, Pa.  
American Seal—The Wm. Connors Paint Mfg. Co., Troy, N. Y.  
Arlington Mfg. Co., Canton, O.  
B B Specialty Co., Pittsburgh, Pa.  
Bartley Graphite Products Co., Bartley, N. J.  
B—Buttun, Valve Co., Chicago, Ill.  
Bernz Co., Otto, Newark, N. J.  
B-K—National Steam Specialty Co., Chicago, Ill.  
Boettiger, Christ, Erie, Pa.  
Bo-wac—H. A. Desper & Co., Worcester, Mass.  
Capitol—U. S. Radiator Corp., Detroit, Mich.  
Capitol—Watson-Penfield Corp., New Bedford, Mass.  
Colebrook's—W. H. Colebrook's Sons, Syracuse, N. Y.  
Connors, Wm., Paint Mfg. Co., Troy, N. Y.  
Coon—Hinds & Coon, Boston, Mass.  
Coopers—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
Crane—Crane Co., Chicago, Ill.  
Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Deegans—Chard & Howe, New York, N. Y.  
Degraco—Detroit Graphite Co., Detroit, Mich.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Eureka—The Otley Paint Mfg. Co., Chicago, Ill.  
Excelsior—The Strong Machinery & Supply Co., New York.  
Filed's—General Fire Extinguisher Co., New York, N. Y.  
Filtite—Pacific Flush Tank Co., Chicago, Ill.  
Fraser—Fraser Paint Co., Detroit, Mich.  
Gasoltite—Thread Tight Co., New York, N. Y.  
Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.



G. K.—The Atlas Mineral Products Co., Mertztown, Pa.  
 Good—Good Mfg. Co., Inc., New York, N. Y.  
 Grapho—General Mfg. Co., Oil City, Pa.  
 Hagan, Geo. J. Co., Pittsburgh, Pa.  
 Hause—Chas. F. Hause Mfg. Co., Inc., Omaha, Neb.  
 Hercules Powder Co., Wilmington, Del.  
 Hosmer—Buffalo Specialty Co., Buffalo, N. Y.  
 Hosmers—G. A. Hosmer Co., Buffalo, N. Y.  
 Ironoid—Metlskin Co., Inc., Rochester, N. Y.  
 Jobbers' Mfg. Co., The, Chicago, Ill.  
 Johns-Manville, Inc., New York, N. Y.  
 Jointite—Pacific Flush Tank Co., Chicago, Ill.  
 Kelly Graphite Mills, The, New York, N. Y.  
 Kelly—Kelly Graphite Mills, New York, N. Y.  
 Leadite—The Leadite Co., Inc., Philadelphia, Pa.  
 Leado—Leado Mfg. Co., Toledo, O.  
 Leak-Cure—Leak Cure Metal Cement Co., New York, N. Y.  
 Metaloid—Strong Machinery & Supply Co., New York.  
 Modern Iron Works, Quincy, Ill.  
 Modern Mfg. Co., The, Cleveland, O.  
 National—Prier Brass Mfg. Co., Kansas City, Mo.  
 Nubian Paint & Varnish Co., The, Chicago, Ill.  
 Old Reliable—George Callahan & Co., New York, N. Y.  
 Pierce Mfg. Co., Bridgeport, Conn.  
 Presurtite—E. A. Wilcox Mfg. Co., Chicago, Ill.  
 Red Cross—The Edgcomb Co., Cuyahoga Falls, O.  
 Red Rustless—Eagle Paint & Varnish Co., Pittsburgh, Pa.  
 Rogers—Hartford Covering Co., Hartford, Conn.  
 Securo—R. M. Starbuck & Sons, Hartford, Conn.  
 Shawmut—Braman, Dow & Co., Boston, Mass.  
 Sexauer, J. A., Mfg. Co., New York.  
 Smooth-On—Smooth-On Mfg. Co., Jersey City, N. J.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
 Stearns Mfg. Co., Toledo, O.  
 Steamtite—Clark Cast Steel Cement Co., Shelton, Conn.  
 Stick-to-Iron—The A. Wilhelm Co., Reading, Pa.  
 Stopaleak Putty, Reliable, Seaboard, Guaranteed—Wm. T. Baker, Inc., Jersey City, N. J.  
 Stop Leak—Utility Supply Co., Philadelphia, Pa.  
 Superflake—Superior Flake Graphite Co., Chicago, Ill.  
 Super-Seal-Tite—Blue Seal Chemical Co., Roselle, N. J.  
 Superbo—Woodward-Wanger Co., Philadelphia, Pa.  
 Thread-Tight—Thread Tight Co., New York, N. Y.  
 Tite-Joint—Kemoshyne Products, Inc., New York, N. Y.  
 Tyte-Uyte—J. C. Whitlam Mfg. Co., Wadsworth, O.  
 Universal—Atlas Mineral Products Co., Lincoln, N. J.  
 U. S. G. Co.'s—United States Graphite Co., Saginaw, Mich.  
 Walworth Mfg. Co., Boston, Mass.  
 Watertight—The Atlas Co., Lincoln, N. J. (tile or soil pipe).  
 Webco—F. W. Webb Mfg. Co., Boston, Mass.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.

**CEMENT, PULLEY COVER.**

Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Leather-to-Metal—F. Ranville Co., Grand Rapids, Mich.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.

**CEMENT, PULLEY SURFACING.**

(See Covering Pulley.)

**CEMENT, RETORT.**

Pecora Paint Co., Philadelphia, Pa.  
 Tharco—The Armstrong Co., Detroit, Mich.

**CEMENT, ROOFING.**

Acme—Acme Petroleum Products Co., Cleveland, O.  
 American Seal—Wm. Connors Paint Mfg. Co., Troy, N. Y.  
 Antiaqua—Union Fibre Co., Winona, Minn.  
 Atlas—The Atlas Co., Lincoln, N. J.  
 Atlas Mineral Products Co., Bound Brook, N. J.  
 Bayerson—Bayerson Oil Works, Erie, Pa.  
 Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Carey—The Philip Carey Mfg. Co., Cincinnati, O.  
 Crown—W. H. Colebrook's Sons, Syracuse, N. Y.  
 Duroseal—Albion Mfg. Co., Seattle, Wash.  
 Federal Elastic—Federal Process Co., Cleveland, O.  
 Flex-a-tile—Heppes-Nelson, Roofing Co., Chicago, Ill.  
 Flexible—H. F. Watson, Erie, Pa.  
 Flintkote—Flintkote Co., Boston, Mass.  
 Graphilatum—The Klein Mfg. Co., Cleveland, O.  
 Liberty—Carter Paint Co., Liberty, Ind.  
 Lux, L. A. Co., Cleveland, Ohio.  
 Malres—Maire Paint Co., Minneapolis, Minn.  
 Mikesell Brothers Co., Chicago, Ill.  
 National Roofing Co., Tonawanda, N. Y.  
 Old Reliable—Bayerson Oil Wks., Erie, Pa.  
 Pecora—Pecora Paint Co., Philadelphia, Pa.  
 Plastic Seal—Walters Mfg. Co., Pittsburgh, Pa.  
 Pyramid—C. S. Garrett & Son Co., Philadelphia, Pa.

Roof-Shield—Ensign Refining Co., Cleveland, O.  
 Rubber—George Callahan & Co., New York, N. Y.  
 Sero Specialty Co., Cleveland, O.  
 Stalzon—Wm. T. Baker, Inc., Jersey City, N. J.  
 Standard—Standard Chemical Corp., Kalamazoo, Mich.  
 Tharco—The Armstrong Co., Detroit, Mich.  
 Tocoal—Tropical Paint & Oil Co., Cleveland, Ohio.  
 Trowel Coat—The Garnet Co., Allentown, Pa.  
 Wheeling Corrugating Co., Wheeling, W. Va.

**CEMENT, RUBBER.**

Geroofco—Griffin Specialty Co., New York.  
 Goodrich, B. F., Rubber Co., Akron, Ohio.  
 Handy—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Kleinert, I. B. Rubber Co., New York, N. Y.  
 Montgomery Bros., Inc., Philadelphia, Pa.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 New York Belting & Packing Co., New York, N. Y.  
 Para—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Railroad—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Salisbury, W. H. & Co., Chicago, Ill.

**CEMENT (OR COMPOUND) SEWER PIPE.**

Ct-K—Atlas Mineral Products Co., Bound Brook, N. J.  
 Sewette—Warren Chemical Div., The Barrett Co., New York.

**CEMENT, SOIL PIPE.**

Balsago—H. A. Desper & Co., Worcester, Mass.  
 Smooth-On Mfg. Co., Jersey City, N. J.

**CEMENT, STEEL.**

Paxson, J. W., Co., Philadelphia, Pa.  
 X-Cel-All—Shanafelt Mfg. Co., Canton, O.

**CENTERS, HIGH SPEED.**

Red E—Ready Tool Co., Bridgeport, Conn.

**CENTERS, INDEX.**

Abrasive Machine Tool Co., East Providence, R. I.  
 Browne & Sharp Mfg. Co., Providence, R. I.  
 Carter & Hakes Mach. Co., Winsted, Conn. (small).  
 Cincinnati Planer Co., Cincinnati, O.  
 Detroit Twist Drill Co., Detroit, Mich.  
 Dickow's—Fred Dickow Machinery Co., Inc., Chicago, Ill.  
 Eastern Tube & Tool Co., Inc., Brooklyn, N. Y.  
 Fay & Scott, Dexter, Me.  
 Garvin Machine Co., The, New York, N. Y.  
 Knight—W. B. Knight Machinery Co., St. Louis, Mo.  
 K. & H. Alive—(Ball Bearing Lathe Tailstock) Kell & Hoch Co., Inc., Newark, N. J.  
 Moller Machine Co., New Rochelle, N. Y.  
 Morse Twist Drill & Machinery Co., New Bedford, Mass.  
 Neff—Paschall Tool Co., Long Beach, Cal.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Pratt & Whitney Co., Hartford, Conn.  
 Simmons Machine Co., Inc., Albany, N. Y.  
 Stark Tool Co., Waltham, Mass.  
 Time Saver—Manufacturers' Hardware Corp., Milwaukee, Wis.

**CENTERS, LATHE, INSERTED POINT**

♦ Detroit Twist Drill Co., Detroit, Mich.

**CENTRIFUGALS.**

American Tool & Machine Co., Boston, Mass.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Invincible Vacuum Cleaner Mfg. Co., Canal Dover, O.  
 Tolhurst—Tolhurst Machine Wks., Troy, N. Y.  
 Weston—Cresson-Morris Co., Philadelphia, Pa.

**CESSPOOLS, BRASS.**

Acheson—Acheson Mfg. Co., Rankin, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Essex Foundry, Newark, N. J.  
 Exeter Brass Wks., Exeter, N. H.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydensville Co., The, Haydensville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Jenkins Mfg. Co., New York, N. Y.  
 Kokomo Brass Works, Kokomo, Ind.  
 McCambridge Co., Philadelphia, Pa.  
 Modern Iron Works, Quincy, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Speakman Co., Wilmington, Del.  
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American Sanitary—Sanitary Company of America, Linfield, Pa.  
Barnes Mfg. Co., The, Mansfield, O.  
Beggs Pipe & Foundry Co., Birmingham, Ala.  
Bignall Co., The, Medina, N. Y.  
Brayman—Brayman Water-Tight Drain Co., New York, N. Y.  
Calco—Haines, Jones & Cadbury Co., Philadelphia.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Central Foundry Co., New York, N. Y.  
Climax—Haines, Jones & Cadbury Co., Philadelphia.  
Estabrook—R. Estabrook's Sons, South Boston, Mass.  
Fee & Mason Mfg. Co., New York, N. Y.  
Fleck Bros. Co., Philadelphia, Pa.  
Glenn Mfg. Co., St. Charles, Ill.  
Government—American Foundry & Mfg. Co., St. Louis, Mo.  
Guilderland Foundry Co., Guilderland, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Ideal, Rainleader—Sanitary Co. of America, Linfield, Pa.  
Johnson, J. D. Co., Philadelphia, Pa.  
Jones Hollow Ware Co., Baltimore, Md.  
Kupferle Foundry Co., John C., St. Louis, Mo.  
McCambridge Co., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Modern Iron Works, Quincy, Ill.  
Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
Newbury Mfg. Co., Monroe, N. Y.  
Rabe Pipe & Foundry Co., Inc., Chattanooga, Tenn.  
Reading—Reading Foundry & Supply Co., Reading, Pa.  
Richmond Fdy. & Mfg. Co., The, Richmond, Va.  
Salem Brass & Iron Co., Salem, N. J.  
S. & S.—Storch & Scheld, Philadelphia, Pa.  
Sanitary Company of America, Linfield, Pa.  
Star—American Foundry & Mfg. Co., St. Louis, Mo.  
Swett Iron Works, A. L., Medina, N. Y.  
Treaty Co., The, Greenville, O.  
Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.  
Willette—American Foundry & Mfg. Co., St. Louis, Mo.  
Willett's—Wolff Mfg. Co., Chicago, Ill.  
Wolverine Foundry Co., Detroit, Mich.

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Sanitary—Sanitary Company of America, Linfield, Pa.

## CESSPOOLS, HYDRANT.

Advance—Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.  
Essex Foundry, Newark, N. J.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Liberty—Humphreys Mfg. Co., The, Mansfield, O.  
Jones Hollow Ware Co., Baltimore, Md.  
Sanitary Co. of America, Linfield, Pa.

## CESSPOOLS, RAIN LEADER.

Ideal—Sanitary Company of America, Linfield, Pa.  
Sanitary—Sanitary Company of America, Linfield, Pa.

## CESSPOOLS, SINK.

American Foundry & Mfg. Co., St. Louis, Mo.

Crestline—The Crestline Mfg. Co., Crestline, O.  
Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.

## CESSPOOLS, STABLE.

Advance—Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Johnson—J. D. Johnson Co., Philadelphia, Pa.  
Jones Hollow Ware Co., Baltimore, Md.  
Kupferle, John C., Foundry Co., St. Louis, Mo.  
McCambridge Co., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Rudolph—Alfred J. Rudolph, Philadelphia, Pa.  
Sanitary Co. of America, Linfield, Pa.  
Swett Iron Works, A. L., Medina, N. Y.  
Wolverine Foundry Co., Detroit, Mich.

## CHAIN, AGRICULTURAL.

Chain Products Co., The, Cleveland, O.  
Link-Belt Company, Chicago, Ill.  
Howe Chain Company, Muskegon, Mich.  
Mundorf Chain Works, York, Pa.  
Rex—Chain Belt Company, Milwaukee, Wis.  
United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

## CHAINS, ANTI-SPREADER.

American Chain Co., Bridgeport, Conn.  
Bridgeport Chain Co., The, Bridgeport, Conn.  
Chain Products Co., The, Cleveland, O.  
Cleveland Chain & Mfg. Co., Cleveland, O.  
United States Chain & Forging Co., Pittsburgh, Pa.

## CHAIN, BACK.

Woodhouse Chain Works, Trenton, N. J.

## CHAIN, BINDER.

Chain Products Co., The, Cleveland, O.  
United States Chain & Forging Co., Pittsburgh, Pa.

## CHAIN, BLOCK.

American Chain Co., Bridgeport, Conn.  
Baldwin Chain Mfg. Co., Worcester, Mass.  
Carr, J. B., Co., Troy, N. Y.  
C. C. and Hercules—Columbus McKinnon Chain Co., Cleveland Chain & Mfg. Co., Cleveland, O.  
Columbus, O.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago, Ill.  
Reading Chain & Block Corp., Reading, Pa.  
Spidel, J. C., Reading, Pa.  
United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.  
Yale & Towne Mfg. Co., New York, N. Y.

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Krein Chain Co., The, Wapakoneta, O.  
United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

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Acme Mfg. Co., Inc., Waterbury, Conn.  
Bridgeport Brass Co., Bridgeport, Conn.  
Chain Products Co., The, Cleveland, O.  
Columbus McKinnon Chain Co., Columbus, O.  
Dallas Brass & Copper Co., Chicago, Ill.  
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Howe Chain Co., Muskegon, Mich.  
Link-Belt Company, Chicago and Philadelphia.  
Monarch—Bridgeport Chain Co., Bridgeport, Conn.  
Rex—Chain Belt Co., Milwaukee, Wis.  
Rome Brass & Copper Co., Rome, N. Y.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Smith & Egge Mfg. Co., Bridgeport, Conn.  
Steel & Johnson Mfg. Co., Waterbury, Conn.  
Waterbury Brass Goods Corp., The, Waterbury, Conn.

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Manumotors Co., Manitowoc, Wis.  
Smith & Egge Mfg. Co., The, Bridgeport, Conn.  
United States Chain & Forging Co., Pittsburgh, Pa.  
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 Newhall Chain Forge & Iron Co., New York, N. Y.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 Woodhouse Chain Works, Trenton, N. J.

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 Woodhouse Chain Works, Trenton, N. J.

**CHAIN, COIL.**

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 Bridgeport Chain Co., Bridgeport, Conn.  
 Carr, J. B. Co., Troy, N. Y.  
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 Chain Products Co., Cleveland, O.  
 Cleveland Chain Mfg. Co., Cleveland, O.  
 Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Liberty—Columbus McKinnon Chain Co., Columbus, O.  
 Mundorf Chain Works, York, Pa.  
 National Chain Co., The, Marietta, Ohio.  
 Oshkosh Mfg. Co., Oshkosh, Wis.  
 Proof—B B B—Krein Chain Co., The, Wapakoneta, O.  
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 Caldwell & Son Co., W. H., Chicago, Ill.  
 Carr, J. B. Co., Troy, N. Y.  
 C. C. and Hercules—Columbus McKinnon Chain Co., Columbus, Ohio.  
 Chain Products Co., Cleveland, O.  
 Cleveland Chain & Mfg. Co., Cleveland, O.  
 Codd Co., E. J., Baltimore, Md.  
 Cullman Wheel Co., Chicago, Ill.  
 Cross Engineering Co., Carbondale, Pa.  
 Diamond Chain & Mfg. Co., Indianapolis, Ind.  
 Federal Malleable Co., West Allis, Wis.  
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 Lamson Co., Boston, Mass.  
 Link-Belt Company, Chicago and Philadelphia.  
 Locke Steel Belt Co., Bridgeport, Conn.  
 Malleable Chain Co., Meadville, Pa.  
 Manumotors Co., Manitowoc, Wis.  
 Mey—Mey Chain Belting & Engineering Co., Buffalo, N. Y.  
 Michigan Sprocket Chain Co., Detroit, Mich.  
 Newhall Chain Forge & Iron Co., New York, N. Y.  
 Reading Chain & Block Corp., Reading, Pa.  
 Rex—Chain Belt Co., Milwaukee, Wis.  
 Rivetless Chain & Engineering Co., Avon, Pa.  
 Rivetless—Cross Engineering Co., Carbondale, Pa.  
 Robbins Conveying Belt Co., New York, N. Y.  
 Simplex—Cross Engineering Co., Carbondale, Pa.  
 Taylor, S. G. Chain Co., Chicago, Ill.  
 Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Union—Union Chain & Mfg. Co., Seville, O.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 Wearless—Taylor Wharton Iron & Steel Co., High Bridge, N. J.  
 Webster Mfg. Co., Chicago, Ill.  
 Welmer Chain & Iron Co., Lebanon, Pa.  
 Welch, T. F., & Co., Boston, Mass.  
 Woodhouse Chain Works, Trenton, N. J.  
 Yale & Towne Mfg. Co., New York, N. Y.

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 Chain Products Co., The, Cleveland, O.

Columbus McKinnon Chain Co., Columbus, O.  
 Mundorf Chain Works, York, Pa.  
 Woodhouse Chain Works, Trenton, N. J.

**CHAIN, CRANE.**

Columbus McKinnon Chain Co., Columbus, O.  
 Newhall Chain Forge & Iron Co., New York, N. Y.  
 Taylor, S. G. Chain Co., Chicago, Ill.  
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 Columbus McKinnon Chain Co., Columbus, O.  
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 Krein Chain Co., The, Wapakoneta, O.  
 Oshkosh Mfg. Co., Oshkosh, Wis.  
 United States Chain & Forging Co., Pittsburgh, Pa.

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Howe Chain Company, Muskegon, Mich.  
 Link-Belt Company, Chicago, Ill.  
 United States Chain & Forging Co., Pittsburgh, Pa.

**CHAIN, DREDGE.**

Ajax and U-B—Standard Chain Co., Pittsburgh, Pa.  
 American Chain Co., Bridgeport, Conn.  
 C. C. and Hercules—Columbus McKinnon Chain Co., Columbus, O.  
 Cleveland Chain & Mfg. Co., Cleveland, O.  
 D. B. G.—Bradlee & Co., Inc., Philadelphia, Pa.  
 Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Krein Chain Co., The, Wapakoneta, O.  
 Reading Chain & Block Corp., Reading, Pa.  
 Round & Son, D., Cleveland, O.  
 Trojan—Carr, J. B., Co., Troy, N. Y.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 Warwick—Newhall Chain Forge & Iron Co., New York, N. Y.  
 Welmer Chain & Iron Co., Lebanon, Pa.  
 Woodhouse Chain Works, Trenton, N. J.

**CHAIN, ELEVATOR.**

Chain Products Co., The, Cleveland, O.  
 Howe Chain Company, Muskegon, Mich.  
 Link-Belt Company, Chicago, Ill.  
 Newhall Chain Forge & Iron Co., New York, N. Y.  
 Rivetless Chain & Engineering Co., Avon, Pa.  
 Taylor, S. G. Chain Co., Chicago, Ill.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 Woodhouse Chain Works, Trenton, N. J.

**CHAIN, FIFTH.**

United States Chain & Forging Co., Pittsburgh, Pa.

**CHAIN, HALTER.**

Bridgeport Chain Co., Bridgeport, Conn.  
 Chain Products Co., The, Cleveland, O.  
 Columbus McKinnon Chain Co., Columbus, O.  
 Mundorf Chain Works, York, Pa.

**CHAIN, HAME.**

Chain Products Co., The, Cleveland, O.  
 United States Chain & Forging Co., Pittsburgh, Pa.

**CHAIN, HITCHING OR MINE.**

United States Chain & Forging Co., Pittsburgh, Pa.

**CHAIN, HOIST.**

Columbus McKinnon Chain Co., Columbus, O.  
 Hobbs, Clinton E. Co., Boston, Mass.  
 Newhall Chain Forge & Iron Co., New York, N. Y.  
 United States Chain & Forging Co., Pittsburgh, Pa.

**CHAIN, HARNESS.**

American Chain Co., Bridgeport, Conn.  
 Bridgeport Chain Co., Bridgeport, Conn.  
 C. C. and Hercules—Columbus McKinnon Chain Co., Columbus, O.  
 Chain Products Co., The, Cleveland, O.  
 Hendryx, Andrew B. Co., New Haven, Conn.  
 Krein Chain Co., The, Wapakoneta, O.  
 Woodhouse Chain Works, Trenton, N. J.

**CHAIN, HEATING FURNACE AND BOILER.**

Acme Mfg. Co., Inc., Waterbury, Conn.  
 American—American Chain Co., Inc., Bridgeport, Conn.  
 Chain Products Co., The, Cleveland, O.  
 Russell, John M., & Co., Inc., Naugatuck, Conn.

Star Brand—The Turner & Seymour Mfg. Co., Torrington, Conn.

◆ United States Chain & Forging Co., Pittsburgh, Pa.

#### CHAIN, HEEL.

Chain Products Co., The, Cleveland, O.  
Columbus McKinnon Chain Co., Columbus, O.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, HYDRANT.

Chain Products Co., The, Cleveland, O.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.

#### CHAIN, ICE, STEEL.

Barber & Co., Chicago, Ill.  
Howe Chain Co., Muskegon, Mich.  
Link-Belt Company, Chicago and Philadelphia.

#### CHAIN, JACK.

Acme Mfg. Co., Inc., Waterbury, Conn.  
Beaton, A. J., Mfg. Co., New Britain, Conn.  
Bliss, E. C., Mfg. Co., Providence, R. I.  
Chain Products Co., The, Cleveland, O.  
Hendryx—Andrew B. Hendryx Co., New Haven, Conn.  
Mattatuck Mfg. Co., The, Waterbury, Conn.  
Plume & Atwood Mfg. Co., Waterbury, Conn.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Smith & Egge Mfg. Co., Bridgeport, Conn.  
Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
Star Brand—The Turner & Seymour Mfg. Co., Torrington, Conn.  
Steele & Johnson Mfg. Co., Waterbury, Conn.  
Waterbury Brass Goods Corporation, The, Waterbury, Conn.  
Wire Goods Co., The, Worcester, Mass.

#### CHAIN, KEY RING AND LEADING.

Acme Mfg. Co., Inc., Waterbury, Conn.  
Bridgeport Chain Co., Bridgeport, Conn.  
Chain Products Co., Cleveland, O.

#### CHAIN, LOADING.

American Chain Co., Bridgeport, Conn.  
Columbus McKinnon Chain Co., Columbus, O.  
Oshkosh Mfg. Co., Oshkosh, Wis.  
Trident—Newhall Chain Forge & Iron Co., New York, N. Y.  
Tri-Weld—Cleveland Chain & Mfg. Co., Cleveland, Ohio.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, LOG.

American Chain Co., Bridgeport, Conn.  
Carr, J. B., Co., Troy, N. Y.  
C. C. and Hercules—Cleveland Chain & Mfg. Co., Cleveland, O.  
Columbus McKinnon Chain Co., Columbus, O.  
◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Mundorf Chain Works, York, Pa.  
Newhall Chain Forge & Iron Co., New York, N. Y.  
Oshkosh Mfg. Co., Oshkosh, Wis.  
Sisco—Federal Tool & Alloy Steel Corp., Brooklyn, N. Y.  
Taylor, S. G., Chain Co., Chicago, Ill.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, MACHINERY.

American—American Chain Co., Bridgeport, Conn.  
Atlas Machine Co., The, Waterbury, Conn.  
Bliss, E. C., Mfg. Co., Providence, R. I.  
Bridgeport Chain Co., Bridgeport, Conn.  
Carr, J. B., Co., Troy, N. Y.  
Chain Products Co., The, Cleveland, Ohio.  
Cleveland Chain & Mfg. Co., Cleveland, O.  
Columbus McKinnon Chain Co., Columbus, O.  
Delaware Steel Company, New York.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Howe Chain Co., Muskegon, Mich.  
◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Krein Co., The, Wapakoneta, Ohio.  
Liberty—Mundorf Chain Works, York, Pa.  
Link-Belt Company, Chicago and Philadelphia.  
Metal Products & Supply Co., Philadelphia, Pa.  
Michigan Sprocket Chain Co., Detroit, Mich.  
Rex—Chain Belt Co., Milwaukee, Wis.  
Round, D. & Son, Cleveland, O.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
U. S.—Chain & Forgings Co., Pittsburgh, Pa.  
V. & O.—The V. & O. Press Co., Brooklyn, N. Y.  
◆ Webster Mfg. Co., Chicago, Ill.  
Whitehall Chain Works, North Fieldsboro, N. J.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, MALLEABLE IRON & STEEL COMBINATION.

Baldwin Chain Mfg. Co., Worcester, Mass.  
Howe Chain Co., Muskegon, Ill.  
Link-Belt Company, Chicago, Ill.

#### CHAIN, MARINE.

D. B. G.—Bradlee & Co., Inc., Philadelphia, Pa.  
National Malleable Casting Co., Cleveland, O.  
Newhall Chain Forge & Iron Co., New York, N. Y.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.  
Welmer Chain & Iron Co., Lebanon, Pa.  
Woodhouse Chain Co., Trenton, N. J.

#### CHAIN, OX.

Woodhouse Chain Co., Trenton, N. J.

#### CHAIN FOR PIPE HANGING.

Chain Products Co., The, Cleveland, O.  
Niagara—American Chain Co., Bridgeport, Conn.  
Woodhouse Chain Co., Trenton, N. J.

#### CHAIN, PLUMBERS.

Acme Mfg. Co., Inc., Waterbury, Conn.  
Bemanco—A. J. Beaton Mfg. Co., New Britain, Conn.  
Beaton, A. J., Mfg. Co., New Britain, Conn.  
Bridgeport Chain Co., Bridgeport, Conn.  
Chain Products Co., The, Cleveland, O.  
Duplex—The Hatheway Mfg. Co., Bridgeport, Conn.  
Hendryx—Andrew B. Hendryx Co., New Haven, Conn.  
Mattatuck Mfg. Co., The, Waterbury, Conn.  
Peck Bros. & Co., The, New Haven, Conn.  
Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
Plume & Atwood Mfg. Co., The, Thomaston, Conn.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Smith & Egge Mfg. Co., Bridgeport, Conn.  
Star Brand—The Turner & Seymour Mfg. Co., Torrington, Conn.  
Stephens Nut & Bolt Co., Central Falls, R. I.  
Waterbury Brass Goods Corporation, The, Waterbury, Conn.  
Wire Goods Co., The, Worcester, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

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Link-Belt Company, Chicago and Philadelphia.  
Mey—Mey Chain Belt Co., Buffalo, N. Y.  
Morse Chain Co., The, Ithaca, N. Y.  
Newhall Chain Forge & Iron Co., New York, N. Y.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.

#### CHAIN, PORCH SWING.

Chain Products Co., The, Cleveland, O.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, PUMP.

Bridgeport Chain Co., Bridgeport, Conn.  
Chain Products Co., The, Cleveland, O.  
◆ Garland Mfg. Co., Pittsburgh, Pa.  
Link-Belt Company, Chicago and Philadelphia.

#### CHAIN, RAFTING.

◆ United States Chain & Forging Co., Pittsburgh, Pa.  
Woodhouse Chain Works, Trenton, N. J.

#### CHAIN, RAILROAD.

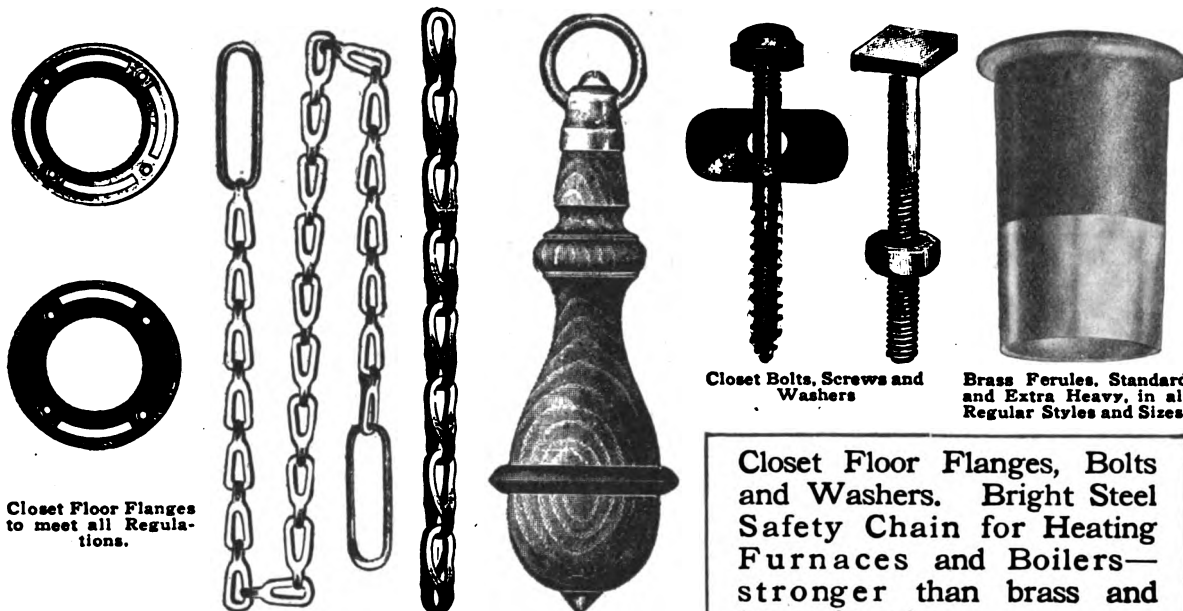
American Chain Co., Bridgeport, Conn.  
Carr, J. B., Troy, N. Y.  
C. C. and Hercules—Columbus McKinnon Chain Co., Columbus, O.  
Chain Products Co., The, Cleveland, O.  
Cleveland Chain & Mfg. Co., Cleveland, O.  
Krein Chain Co., The, Wapakoneta, O.  
Newhall Chain Forge & Iron Co., New York, N. Y.  
Niagara, Eureka, Tense, Lock Link and American—American Chain Co., Inc., Bridgeport, Conn.  
Round & Son, D., Cleveland, O.  
Taylor, S. G., Chain Co., Chicago, Ill.  
◆ United States Chain & Forging Co., Pittsburgh, Pa.  
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Baldwin Chain Mfg. Co., Worcester, Mass.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Howe Chain Co., Muskegon, Mich.  
Link-Belt Company, Chicago and Philadelphia.  
Whitney—Whitney Mfg. Co., Hartford, Conn.

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Bridgeport Chain Co., Bridgeport, Conn.  
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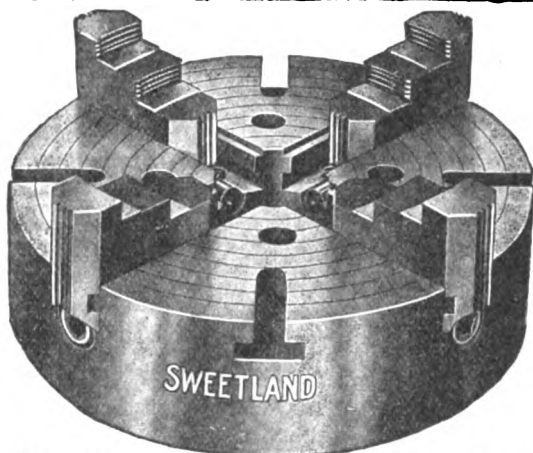
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♦ Skinner—Skinner Chuck Co., New Britain, Conn.

Spur Geared Scroll—Westcott Chuck Co., Oneida, N. Y.

Steel-Reinforced—Oneida National Chuck Co., Oneida, N. Y.

♦ Sweetland—Hoggson & Pettis Mfg. Co., The, New Haven, Conn.

T. & W.—Terkelsen Machine Co., Boston, Mass.

♦ Union—Union Mfg. Co., New Britain, Conn.

Universal—Westcott Chuck Co., Oneida, N. Y.

Wear Ever—Scully Jones & Co., Chicago, Ill.

Westcott—Westcott Chuck Co., Oneida, N. Y.

Whiton Machine Co., The D. E., New London, Conn.

♦ Wiley & Russell Mfg. Co., Greenfield, Mass.

## CHUCKS, MAGNETIC.

Arter—Persons Arter Machine Co., Worcester, Mass.

Blanchard—Blanchard Machine Co., Cambridge, Mass.

D & W—D & W Fuse Co., Works of General Electric Co., Providence, R. I.

Heald—Heald Machine Co., Worcester, Mass.

Lawson & Co., Inc., New York, N. Y.

Taft-Pierce Mfg. Co., Woonsocket, R. I.

Walker & Co., O. S., Worcester, Mass.

## CHUCKS, MILLING MACHINE.

Horton, E. & Son Co., Inc., The, Windsor Locks, Conn.

♦ Skinner Chuck Co., The, New Britain, Conn.

♦ Sweetland—Hoggson & Pettis Mfg. Co., The, New Haven, Conn.

♦ Union Mfg. Co., New Britain, Conn.

Wear Ever—Scully Jones & Co., Chicago, Ill.

## CHUCKS (AND HOLDERS), NIPPLE.

Armstrong Mfg. Co., The, Bridgeport, Conn.

B. & K.—Bignall & Keeler Mfg. Co., Edwardsville, Ill.

♦ Curtis—The Curtis & Curtis Co., Bridgeport, Conn.

Jarecki Mfg. Co., Erie, Pa.



Loew Victor—Loew Mfg. Co., Cleveland, O.  
 Oster Mfg. Co., Cleveland, O.  
 Sandusky—The Modern Machinery Co., Wilmington, Del.  
 Saunders—D. Saunders' Sons, Inc., Yonkers, N. Y.  
 Victor—The Loew Mfg. Co., Cleveland, O.  
 Waltham Appliance Co., Waltham, Mass.

**CHUCKS, PLANNER.**

American Tool Works Co., Cincinnati, O.  
 Cincinnati Planer Co., The, Cincinnati, O.  
 ♦ Skinner Chuck Co., The, New Britain, Conn.  
 ♦ Sweetland—Hoggson & Pettis Mfg. Co., The, New Haven, Conn.  
 ♦ Union Mfg. Co., New Britain, Conn.

**CHUCKS, PNEUMATIC.**

Aero—Manufacturers' Equipment Co., Chicago, Ill.  
 Garvin Machine Co., The, New York, N. Y.  
 Hannifin Mfg. Co., Chicago, Ill.  
 Lavoe—Frontier Iron Works, Buffalo, N. Y.  
 Logan—Logansport Machine Co., Logansport, Ind.  
 M. E. C.—Manufacturers Equipment Co., Chicago, Ill.

**CHUCKS, PUNCH.**

Heartley Machine, Variety Iron & Tool Works, Toledo, O.

**CHUCKS, RING WHEEL.**

Perfection—Gardner Machine Co., Beloit, Wis.

**CHUCKS, STAYBOLT, SQUARE GRIP.**

Gustin-Bacon Mfg. Co., Kansas City, Mo.

**CHUCKS, TAPPING MACHINE.**

Bicknell-Thomas Co., Greenfield, Mass.  
 Cincinnati—Bickford Tool Co., Cincinnati, O.  
 Errington—Errington Mechanical Laboratory, New York, N. Y. (auto-reverse.)  
 National—Oneida National Chuck Co., Oneida, N. Y.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Proconier—Wm. L. Proconier, Chicago, Ill.  
 Saunders—D. Saunders' Sons, Inc., Yonkers, N. Y.  
 ♦ Skinner Chuck Co., The, New Britain, Conn.  
 ♦ St. Louis—St. Louis Machine Tool Co., St. Louis.  
 Woodstock—Peter Bros. Mfg. Co., Algonquin, Ill.

**CHUCKS, WIRE.**

Wade American Tool Co., Waltham, Mass.  
 Welch, T. F., & Co., Boston, Mass.

**CHUCKS, WRENCHLESS.**

Barker—Thomas Elevator Co., Chicago, Ill.  
 Barker—Foster Machine Co., Elkhart, Ind.

**CHUTES, COAL, ORE AND CONCRETE.**

Akron Barrow Co., Cleveland, O.  
 Archer Iron Works, Chicago, Ill.  
 Canton Foundry & Machine Co., Canton, Ohio.  
 Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
 C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Converse—Converse, F. A., Co., Johnson City, N. Y.  
 Gifford-Wood Co., Hudson, N. Y.  
 Hunt Co., C. W., West New Brighton, N. Y.  
 Indiana Foundry Co., Indiana, Pa.  
 Insley Mfg. Co., Indianapolis, Ind.  
 Iowa—Iowa Foundry & Mfg. Co., Ft. Dodge, Iowa.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lansing Co., Lansing, Mich.  
 ♦ Link Belt Company, Chicago and Philadelphia.  
 Majestic Co., The, Huntington, Ind.  
 Munroe, R., & Sons Mfg. Corp., Pittsburg, Pa.  
 Sackett Chicago—Sackett Screen & Chute Co., Chicago, Ill.  
 Seale & Sons Co., Wm. B., Pittsburg, Pa.  
 Sykes—Sykes Metal Lath & Roofing Co., Niles, O.  
 Tisco—Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Waterloo Register Co., Waterloo, Iowa.

**CHUTES, LAUNDRY, STEEL, ENAMEL LINED.**

Pfaudler Co., Rochester, N. Y.

**CHUTES, SPIRAL.**

Amco—Alvey Mfg. Co., St. Louis, Mo.  
 Chicago Conveyor Co., Chicago, Ill.  
 Haslett Spiral Chute Co., Philadelphia, Pa. (Merchandise.)  
 Lamson Co., Boston, Mass.  
 Mathews Gravity Carrier Co., Ellwood City, Pa.  
 Standard Conveyor Co., North St. Paul, Minn.

**CHUTES, STEEL, COAL.**

Hall Mfg. Co., Cedar Rapids, Ia.

**CIRCULATING TUBES, RANGE BOILER.**

Gerard—Gerard Mfg. Co., Dickson City, Pa.

**CIRCULATORS FOR HOT WATER HEATING SYSTEMS.**

Advance Pump & Compressor Co., Battle Creek, Mich.  
 D. & T.—D. & T. Mfg. Co., St. Louis, Mo.  
 Taylor Steam Specialty Co., Battle Creek, Mich.

**CIRCULATORS, INTERNALLY FIRED BOILERS.**

Kebec—John Simmons Co., New York.  
 McDaniel—Watson & McDaniel Co., Philadelphia, Pa.

**CLAMPS, FOR AIR PUMPS.**

Crabill—Crabill Hose Clamp Co., Battle Creek, Mich.

**CLAMPS, ANCHOR.**

Larkin Packer Co., Bartlesville, Okla.  
 Norris, W. C., Tulsa, Okla.

**CLAMPS, ARCHITECTURAL IRON WORK.**

Massey Vise Co., Chicago, Ill.

**CLAMPS, BASIN.**

Ampico—American Pin Co., Waterbury, Conn.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Crescent—Haines, Jones & Cadbury Co., Philadelphia.  
 Exeter Brass Works, Exeter, N. H.  
 Farnan Brass Works, Cleveland, O.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Good Mfg. Co., Inc., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 McDonald Mfg. Co., A. Y., Dubuque, Iowa.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller—H. Mueller Mfg. Co., Decatur, Ill.  
 Never-Slip—Wolverine Brass Works, Grand Rapids, Mich.  
 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes Co., Charles, Philadelphia, Pa.  
 Phillips—Garrison Brass & Machine Works, New York.

♦ Star—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Superior—Superior Mfg. Co., Cleveland, O.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**CLAMPS, BEAM OR GIRDER.**

A. B. C.—Illinois Malleable Iron Co., Chicago, Ill.  
 A. B. C.—Fee & Mason Mfg. Co., New York, N. Y.  
 Acme—John Simmons Co., New York, N. Y.  
 Bettcher Stamping & Mfg. Co., The, Cleveland, O.  
 ♦ Chicago Pulley & Shafting Co., Chicago, Ill.  
 Clark—Reed Mfg. Co., Erie, Pa.  
 Clyde Iron Works, Duluth, Minn.  
 The Dad—D. A. Donovan, Auburn, N. Y.  
 F. & M.—Fee & Mason, New York, N. Y.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Modern Mfg. Co., The, Cleveland, Ohio.  
 Norman, C. Erwin, & Co., Chicago, Ill.  
 Penn Engineering Co., The, Philadelphia, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, Ohio.  
 Robinson Mfg. Co., The, Cleveland, Ohio.  
 Rockwood Sprinkler Co. of Mass., Worcester, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 ♦ Woods, T. B., Sons Co., Chambersburg, Pa.

**CLAMPS, BELT TIGHTENING.**

(See also Tighteners, Belt.)

Gardner & Miller—The Billings & Spencer Co., Hartford, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Little Giant—Geo. W. Southwick Co., Stamford, Conn.  
 L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ Porter—The Hoggson & Pettis Mfg. Co., New Haven, Conn.  
 Smith, Otis A., Rockfall, Conn.  
 ♦ Woods, T. B., Sons Co., Chambersburg, Pa.

**CLAMPS, BOILER.**

Le Count—W. G. Le Count Tool Works, South Norwalk, Conn.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 The Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, BRICK HANDLING.**

Donley—The Donley Bros. Co., Cleveland, Ohio.  
 Duplex Mfg. & Foundry Co., Elyria, O.

**CLAMPS, "C."**

- ♦ **Armstrong**—Armstrong Bros. Tool Co., Chicago, Ill. (drop forged steel).
- ♦ **Billings & Spencer Co.**, Hartford, Conn. Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, Ohio.
- Colts**—Batavia Clamp Co., Batavia, N. Y.
- Handy**—Handy Mfg. Co., Chicago.
- Hargrave**—The Cincinnati Tool Co., Cincinnati, O.
- Le Count**, Wm. G., South Norwalk, Conn. (Drop forged).
- Stearns, E. C. & Co.**, Syracuse, N. Y.
- ♦ **Western Tool & Mfg. Co.**, Springfield, O.
- ♦ **Williams, J. H. & Co.**, Brooklyn, N. Y.

**CLAMPS, CABLE.**

- Diamond**—Diamond Expansion Bolt Co., New York.
- Flacher & Hayes Rope & Steel Co.**, Chicago, Ill.
- Long Saut**—Diamond Expansion Bolt Co., New York, N. Y.
- Sebco**—Star Expansion Bolt Co., New York, N. Y.
- U. W.**—The Upson-Walton Co., Cleveland, O.

**CLAMPS, CASE, MITRE BED.**

- Benedict Patent**—Grand Rapids School Equipment Co., Grand Rapids, Mich.

**CLAMPS, CASING, OIL WELL.**

- Norris, W. C.**, Tulsa, Okla.

**CLAMPS, CLINCH.**

- Butterworth**—Lansing Stamping & Tool Co., Lansing, Mich.

**CLAMPS, CLOSET AND HOPPER.**

- Boston Hopper**—Carpenter & Paterson, Boston, Mass.
- C. and P.**—Carpenter & Paterson, Boston, Mass.
- Cochran**—Locke, Stevens & Co., Boston, Mass.
- Exeter Brass Works**, Exeter, N. H.
- Glenn Mfg. Co.**, St. Charles, Ill.
- Haydenville Co.**, The, Haydenville, Mass.
- Hellands**—Geo. W. Helland, New York.
- Peck Bros. & Co.**, The, New Haven, Conn.
- Street & Kent Mfg. Co.**, Chicago, Ill.
- Union Brass & Metal Mfg. Co.**, St. Paul, Minn.
- Waterbury Mfg. Co.**, Waterbury, Conn.
- Wolverine Brass Works**, Grand Rapids, Mich.

**CLAMPS, COLUMN.**

- ♦ **Billings & Spencer Co.**, Hartford, Conn.
- Black Bros. Co.**, The, Mendota, Ill.
- Butterworth**—Lansing Stamping & Tool Co., Lansing, Mich.
- Hargrave**—Cincinnati Tool Co., Cincinnati, O.
- Insley Mfg. Co.**, Indianapolis, Ind.
- Koch, Paul W., Co.**, Chicago, Ill.
- Sterling Wheelbarrow Co.**, West Allis, Wis.
- Taylor, Jas. L., Mfg. Co.**, Poughkeepsie, N. Y.

**CLAMPS, COMBINATION, OIL WELL.**

- Norris, W. C.**, Tulsa, Okla.

**CLAMPS, CONCRETE WORKERS.**

- Insley Mfg. Co.**, Indianapolis, Ind.
- Stearns, E. C. & Co.**, Syracuse, N. Y.

**CLAMPS, DRILL BLOCK.**

- Massey Vise Co.**, Chicago, Ill.
- Quick Action**—St. Louis Sales Co., St. Louis, Mo.
- Western Tool & Mfg. Co.**, Springfield, O.

**CLAMPS, ECCENTRIC.**

- Colt's**—Batavia Clamp Co., Batavia, N. Y.
- Handy**—Handy Mfg. Co., Chicago.
- Smith, Otis A.**, Rockfall, Conn.
- The Taylor**—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, FLANGING.**

- Cleveland Punch & Shear Works Co.**, Cleveland, O.
- Hilles & Jones Co.**, Wilmington, Del.
- Southwark Foundry & Machine Co.**, Philadelphia, Pa.

**CLAMPS, FLASK.**

- Sandusky Tool Co.**, Sandusky, O.
- Tessmer Machine & Tool Co.**, Detroit, Mich.

**CLAMPS, FLOORING.**

- Stearns, E. C. & Co.**, Syracuse, N. Y.

**CLAMPS, GIRDER.**

- Ahlender**—Thos. Wrigley Co., Chicago, Ill.
- ♦ **Bond Foundry & Machine Co.**, Manheim, Pa.
- MacTaggart's**—MacTaggart's Mfg. Co., Philadelphia, Pa.
- Pioneer**—Standard Pressed Steel Co., Philadelphia, Pa.

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- ♦ **Bethlehem Steel Co.**, Bethlehem, Pa.
- Fischer & Hayes Rope & Steel Co.**, Chicago, Ill.
- Gund Mfg. Co.**, La Crosse, Wis.
- ♦ **Oliver Iron & Steel Co.**, Pittsburgh, Pa.
- Trident**—Newhall Chain Forge & Iron Co., New York, N. Y.
- U. W.**—The Upson Walton Co., Cleveland, O.

**CLAMPS, FOR HOLDING BRASS PIPE.**

- Burke's**—B. B. Specialty Co., Pittsburg, Pa.
- Kink Klamp**—Woodward-Wanger Co., Philadelphia, Pa.
- Wakefield**—Clarence E. Wakefield, Worcester, Mass.

**CLAMPS, HOPPER.**

- Exeter Brass Works**, Exeter, N. H.

**CLAMPS, HOSE.**

(See also "Couplings Hose.")

- Adjustable**—Universal Industrial Corp., Hackensack, N. J.
- Adjustable**—Metal Stamping Co., Long Island City, N. Y.
- Allen, W. D., Mfg. Co.**, Chicago, Ill.
- American Brass & Copper Co.**, The, New York, N. Y.
- American Foundry & Mfg. Co.**, St. Louis, Mo.
- Bartlett**—Bartlett Mfg. Co., Detroit, Mich.
- Bellamy**—Bartlett Mfg. Co., Detroit, Mich.
- Bull Dog**—W. D. Allen Mfg. Co., Chicago, Ill.
- ♦ **Caldwell**—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Chicago Pneumatic Tool Co.**, New York.
- Clancy, J. R.**, Syracuse, N. Y.



- Clincher**—Clincher Clamp Co., Battle Creek, Mich.
- Common Sense**—The Allen Fire Department Supply Co., Providence, R. I.
- Crabill**—Crabill Hose Clamp Co., Battle Creek, Mich.
- Dallett**—Thos. H. Dallett Co., Philadelphia, Pa.
- "D"**—M. Donohue & Son, New York.
- Double Tight**—United Steel & Wire Co., Battle Creek, Mich.
- Elkhart Brass Mfg. Co.**, Elkhart, Ind.
- Farnam Brass Works Co.**, The, Cleveland, O.
- Fitsall**—Wolverine Brass Works, Grand Rapids, Mich.
- Fitzgerald Mfg. Co.**, Torrington, Conn.
- Fries & Co.**, Buffalo, N. Y.
- Glauber Brass Mfg. Co.**, Cleveland, O.
- Globe Machine & Stamping Co.**, Cleveland, O.
- Griphold**—Racine Iron & Wire Works, Racine, Wis.
- Haydenville Co.**, Haydenville, Mass.
- Herz** (Bougie Mercedes) Pro-mo-tor Fabricating Corp., New York.
- Ideal Clamp Mfg. Co.**, Brooklyn, N. Y.
- Ingersoll-Rand Co.**, New York.
- ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.
- King**—Dixon Valve & Coupling Co., Philadelphia, Pa.
- Knox**—Knox Mfg. Co., Inc., Philadelphia, Pa.
- Lightning**—Harrisburg Stamping Co., Harrisburg, Pa.
- Lock Roll**—Federal Tin Co., Baltimore, Md.
- McChesney**—J. S. McChesney & Co., Chicago, Ill. (wire).
- McNab & Harlin Mfg. Co.**, New York, N. Y.
- Mulconroy**—Mulconroy Co., Inc., Philadelphia, Pa.
- National Malleable Casting Co.**, Cleveland, O.
- Neverslip**—Cleveland Pneumatic Tool Co., Cleveland, Ohio.
- Phoenix Hardware Mfg. Co.**, Buffalo, N. Y.
- ♦ **Safety**—Sherwood Mfg. Co., Buffalo, N. Y.
- Schlangen Bros. Co.**, Chicago, Ill.
- ♦ **Sherman**—E. B. Sherman Mfg. Co., Battle Creek, Mich.
- Simmons, John, Co.**, New York, N. Y.

- Standard Brass & Iron Co., Milwaukee, Wis.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 ♦ Suction—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Sure Grip—J. R. Clancy, Syracuse, N. Y.  
 Thompson Mfg. Co., Los Angeles, Cal.  
 Thompson—Newark Stamping & Foundry Co., The, Newark, N. J.  
 Universal—Schlangen Bros. Co., Chicago, Ill. (wire)  
 Universal—Universal Industrial Corp., Hackensack, N. J.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Yerdon Cast Brass—Wm. Yerdon, Fort Plain, N. Y.

**CLAMPS, HOSE, DOUBLE.**

- Richardson Brass Co., Edro, Baltimore, Md.  
 ♦ Sherman—H. B. Sherman Mfg. Co., Battle Creek, Mich.

**CLAMPS, HOSE TO PIPE.**

- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Strong, Carlisle & Hammond Co., Cleveland, O.  
 Sure Hold—C. A. Claflin Co., Boston, Mass.

**CLAMPS, HYDRANT.**

- C. C.—Crane Co., Chicago, Ill.  
 ♦ Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 M. T. C.—National Tube Co., Pittsburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.

**CLAMPS, JOINT WIPING.**

- Starbuck, R. M., & Sons, Hartford, Conn.

**CLAMPS, KEYSHEAT.**

- Starrett, L. S. Co., Athol, Mass.

**CLAMPS, MACHINISTS'.**

- ♦ Almond, T. R. Mfg. Co., Ashburnham, Mass.  
 ♦ Armstrong Bros. Tool Co., Chicago, Ill.  
 Athol Machine Co., Athol, Mass.  
 ♦ B. & S.—The Billings & Spencer Co., Hartford, Conn.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cad—Standard Shop Equipment Co., Philadelphia, Pa.  
 Grabler Mfg. Co., Cleveland, O.  
 Hargrave—Cincinnati Tool Co., Cincinnati, O.  
 Howell—Howell & Murray, Waverly, N. Y.  
 Ideal—Wm. S. Nicholls, Hoosick Falls, N. Y.  
 Le Count—W. G. Le Count Tool Works, South Norwalk, Conn.  
 Malleable Iron Fittings Co., Branford, Conn.  
 New London Vise Works, New London, Conn.  
 Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Starrett, L. S. Co., The, Athol, Mass.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 Steel & Tube Co., of America, Chicago, Ill.  
 Taylor Mfg. Co., James L., Bloomfield, N. J.  
 Union Tool Co., Orange, Mass.  
 Welch, T. F., & Co., Boston, Mass. (brass).  
 ♦ Western Tool & Mfg. Co., Springfield, O.  
 ♦ Williams & Co., J. H., Brooklyn, N. Y.

**CLAMPS, MITRE.**

- Colt's—Batavia Clamp Co., Batavia, N. Y.  
 Handy Mfg. Co., Chicago.  
 Reeves—Reeves Hardware Mfg. Co., Chicago, Ill.  
 Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, PARALLEL, MACHINISTS' AND TOOL-MAKERS'.**

- Besly—Charles H. Besly & Co., Chicago, Ill.  
 Knaue Tool Works, Rock Island, Ill.  
 Massachusetts Tool Co., Greenfield, Mass.  
 Starrett, L. S. Co., The, Athol, Mass.  
 ♦ Williams & Co., J. H., Brooklyn, N. Y.

**CLAMPS, PILING.**

- Black Bros. Co., The, Mendota, Ill.

**CLAMPS, PIPE REPAIR.**

- Carpenter & Paterson, Boston, Mass.  
 Crane Co., Chicago, Ill.  
 Custer—Custer Coupling Co., Bradford, Pa.  
 Dayton—The Dayton Pipe Coupling Co., Dayton, O.  
 Dicke Tool Co., The, Downers Grove, Ill.  
 Dresser—S. R. Dresser Mfg. Co., Bradford, Pa.  
 Easy—Wm. Moll, Cleveland, O.  
 Ellis—Ellis & Ford Mfg. Co., Detroit, Mich.  
 Emergency—M. B. Skinner Co., Chicago, Ill.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hammon Coupler Co., The, Mount Vernon, Ohio.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 King Bee—F. A. Nusbaum, Lockland, O.  
 Lord—The L. L. Lord Co., Meadville, Pa.  
 McGookin, D. H., Philadelphia, Pa.  
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 ♦ Yarway—Yarnell-Waring Co., Philadelphia, Pa.

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 Hargrave—Cincinnati Tool Co., Cincinnati, O.  
 National Metal Products Co., Indianapolis, Ind.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

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Phoenix Hardware Mfg. Co., Buffalo, N. Y.

**CLAMPS, RAIL (Car Stop)**

M. & M.—M. & M. Rail Clamp Co., Pittsburgh, Pa.

**CLAMPS, RIVETING.**

Vulcan Tool Mfg. Co., The, Quincy, Mass.

**CLAMPS, ROPE.**

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Pratt, Wm. E., Mfg. Co., Chicago, Ill.

**CLAMPS, RULE.**

Starrett, L. S. Co., The, Athol, Mass.

**CLAMPS, SASH AND DOOR.**

Hermance Machine Co., Williamsport, Pa.  
 The Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, SAW.**

- ♦ Atkins, E. C. & Co., Indianapolis, Ind.  
 Crescent Machine Co., Leetonia, O.  
 ♦ Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 ♦ Machinery Co. of America, Big Rapids, Mich.  
 New Britain Circular Saw Clamp—New Britain Machine Co., New Britain, Conn.  
 Phoenix Hardware Co., Buffalo, N. Y.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 Taylor, Jas. L., Mfg. Co., Poughkeepsie, N. Y.  
 Wardwell Mfg. Co., Cleveland, O.

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 National—National Tube Co., Pittsburg, Pa.

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 Hauer, J. B., Brooklyn, N. Y.  
 Snaeco (Adjustable)—Sanitary Company of America, Linfield, Pa.

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- Dick Tool Co., Downers Grove, Ill.  
 Hargrave—Cincinnati Tool Co., Cincinnati, O.  
 Klein—Mathias Klein & Son, Chicago, Ill.  
 ♦ Peck, Stow & Wilcox Co., New York, N. Y.  
 Verifax—M. W. Dunton Co., Providence, R. I.

**CLAMPS, STEEL BAR.**

Aldrich, William K. Co., Lowell, Mass.  
 Colt's—Batavia Clamp Co., Batavia, N. Y.  
 Freeport Truck & Clamp Co., Freeport, Mich.  
 Hargrave—Cincinnati Tool Co., Cincinnati, O.  
 Hugo—Norfolk Mfg. Co., Norfolk, Conn.  
 Sheldon's—E. H. Sheldon & Co., Muskegon, Mich.  
 Starrett, L. S. Co., The, Athol, Mass.  
 Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, STRAP**

Cad—Standard Shop Equipment Co., Philadelphia, Pa.

♦ Williams, J. H., & Co., Brooklyn, N. Y.

**CLAMPS, TOOLMAKERS'**

Brown & Sharpe Mfg. Co., Providence, R. I.

♦ Williams, J. H., & Co., Brooklyn, N. Y.

**CLAMPS, VALVE, RADIATOR, AIR.**

Beaton & Cadwell Mfg. Co., New Britain, Conn.

**CLAMPS, VISE FASTENING.**

Prentiss Vise Co., New York, N. Y.

♦ Williams, J. H., & Co., Brooklyn, N. Y.

**CLAMPS, WAGON SPRING.**

Taylor—James L. Taylor Mfg. Co., Poughkeepsie, N. Y.

**CLAMPS, WOODWORKERS'**

Aldrich—William K. Aldrich Co., Lowell, Mass.

Black Bros. Co., The, Mendota, Ill.

Cincinnati Tool Co., The, Cincinnati, Ohio.

Clipper—Clipper Tool Co., Buffalo, N. Y.

Colt's—Batavia Clamp Co., Batavia, N. Y.

Colt's, T. & C.—Timmis & Clissold, Bound Brook, N. J.

Dayton—Dayton Malleable Iron Co., Dayton, O.

Falls Machine Co., Sheboygan Falls, Wis.

Francis—Francis Co., Chas. E., Rushville, Ind.

Goodell-Pratt Co., Greenfield, Mass.

Grand Rapids School Equipment Co., Grand Rapids, Mich.

Handy—Handy Mfg. Co., Chicago.

Hargrave—Cincinnati Tool Co., Cincinnati, O.

Henderer's, A. L., Sons, Wilmington, Del.

Ideal—W. S. Nicholls, Hoosick Falls, N. Y.

Jenkins Machine Co., Sheboygan, Wis.

Jorgensen—Adjustable Clamp Co., Chicago, Ill.

Obermayer Co., The S., Cincinnati, O.

Oliver Machinery Co., Grand Rapids, Mich.

Palmer's—A. E. Palmer & Sons, Owosso, Mich.

Peck, Stow & Wilcox Co., Southington, Conn.

Peerless—Adjustable Clamp Co., Chicago, Ill.

Phoenix Hardware Co., Buffalo, N. Y.

Pony—Adjustable Clamp Co., Chicago, Ill.

Prairie—Prairie du Chien Tool Co., Prairie du Chien, Wis.

Pratt—Wm. E. Pratt Mfg. Co., Chicago, Ill.

Rockford Mitre Box Co., Rockford, Ill.

Sandusky Tool Co., Sandusky, O.

Stearns & Co., E. C., Syracuse, N. Y.

Steel & Tube Co. of America, Chicago, Ill.

Taylor Mfg. Co., James L., Poughkeepsie, N. Y.

Thompson—Erie Stamping & Mfg. Co., Erie, Pa.

♦ Williams, J. H., & Co., Brooklyn, N. Y.

**CLAY, REFRACTORY.**

Laclede-Christy Clay Products Co., St. Louis, Mo.

**CLEANERS, BAG OR SACK.**

Unit—Handy Sack Baler Co., Cedar Rapids, Ia.

Wizard—Handy Sack Baler Co., Cedar Rapids, Ia.

Wolf Company, The, Chambersburg, Pa.

**CLEANERS, BALLAST.**

Link-Belt Company, Chicago and Philadelphia, Pa.

Littleford Bros., Cincinnati, Ohio.

**CLEANERS, BELT.**

Eclipse Pulley Covering Co., Chicago, Ill.

Grease Eradicator—F. Ranville Co., Grand Rapids, Mich.

Shultz Belting Co., St. Louis, Mo. (oil extracting powder.)

**CLEANERS, BOILER FLUE AND TUBE.**

(See also, "Blowers, Boiler Flue Cleaning.")

A. & D. Improved—Cleveland Flue Cleaner Mfg. Co., Cleveland, O.

Abram's Spiral—Newark Brush & Scraper Co., Newark, N. J.

Adriance-Bate Steam Fuel Economy Corp., Brooklyn, N. Y.

♦ American Steam Packing Co., Boston, Mass.

Automatic—Wm. Maurer & Co., South Bend, Ind.

Bernz, Otto, Newark, N. J.

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DECATUR, ILL.

Browne, F. W., Farmington, N. H.

Bull Dog—Liberty Mfg. Co., Pittsburg, Pa.

C. E. C.—Combustion Engineering Corp., New York.

C. E. S. Co.—Chicago Engineer Supply Co., Chicago, Ill.

Chicago—Seehausen, Wehrs & Co., Chicago.

Collicott's—Newark Brush & Scraper Co., Newark, N. J.

♦ Combination—A. W. Chesterton Co., Boston, Mass.

Cook's—Jas. A. Griffiths & Son, Philadelphia, Pa.

♦ Correct—Michigan Lubricator Co., Detroit, Mich.

Criss Cross—Worcester Brush & Scraper Company, Worcester, Mass.

Cristoffel, A., Brooklyn, N. Y.

Cyclone—Liberty Mfg. Co., Pittsburg, Pa.

Dallett, Thos. H., Co., Philadelphia, Pa.

Darling Valve & Mfg. Co., Williamsport, Pa.

♦ Dean Rotary—Sherwood Mfg. Co., Buffalo, N. Y.

Dean—The Wm. B. Pierce Co., Buffalo, N. Y.

Dehn's—Compound Injector & Specialty Co., Chicago, Ill.

Demon—The General Specialty Co., Buffalo, N. Y.

♦ Duplex—Sherwood Mfg. Co., Buffalo, N. Y.

Elliott—Elliott Co., Jeanette, Pa. (pneumatic).

♦ Engineer's Favorite—Sherwood Mfg. Co., Buffalo, N. Y.

♦ Engineer's Favorite—A. W. Chesterton & Co., Boston.

Engineer's Favorite—Newark Brush & Scraper Co., Newark, N. J.

Engineer's Favorite—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

♦ Engineer—Michigan Lubricator Co., Detroit, Mich.

Expansion—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

Faries—The Field & Shorb Co., Decatur, Ill.

Farley—J. W. Paxson Co., Philadelphia, Pa.

Favorite Combination—Newark Brush & Scraper Co., Newark, N. J.

Felton, S. A., & Son, Manchester, N. H.

Flint, Warren F. Co., Boston, Mass.

Flue Brush—Worcester Brush & Scraper Company, Worcester, Mass.

Flu-Clenco—K. E. K. Co., Inc., Syracuse, N. Y.

♦ Gem—Gem Mfg. Co., Pittsburg, Pa.

Gerhardt, C., New York, N. Y.

Gilmore—Gilmore Tube Scraper Works, Buffalo, N. Y.

Goss, Frank A., Morristown, N. J.

Grimm's—John S. Bushnell & Co., New York, N. Y.

Halsler Bros. Co., Chicago, Ill.

Henry—The Steam Appliance Co., West Allis, Wis.

Holt—Rosedale Fdy. & Machine Co., Pittsburg, Pa.

Hostetler, J. F., & Co., Mulvane, Kans.

Ideal—Perfection Grate & Supply Co., Springfield, Mass.

Improved Ingalls—Worcester Brush & Scraper Co., Worcester, Mass.

Ingall's—F. W. Browne, Farmington, N. H.

Ingalls' Combination—Newark Brush & Scraper Co., Newark, N. J.

♦ Ingall's Elliptic—A. W. Chesterton Co., Boston, Mass.

Keeley Boiler Works, J. J., Jackson, Mich.

♦ King—Michigan Lubricator Co., Detroit, Mich.

Lagonda—Lagonda Mfg. Co., Springfield, O.

Lay, Joseph, Co., The, Ridgeville, Ind.

Liberty, Standard—Liberty Mfg. Co., Pittsburg, Pa.

Lighting—Maurer, Wm., & Co., South Bend, Ind.

Maltby, Geo. W., & Sons So., Buffalo, N. Y.

Mason Brush Works, Worcester, Mass.

Matthews Attachment—Joseph T. Ryerson & Son, Chicago.

McLaughlin—Geo. C. McLaughlin Mfg. Co., Boston.

Mulholland, Wm., New York, N. Y.

Nathan Mfg. Co., New York, N. Y.

New Bern—New Bern Flue Cleaner Co., New Bern, N. C.

Osborn Mfg. Co., Inc., Cleveland, O.

Pago—Paige & Jones Chemical Co., New York, N. Y.

Perfect—L. G. Doolittle & Son, Binghamton, N. Y.

Phoenix—Geo. W. Maltby & Sons Co., Buffalo, N. Y.

Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

Poole Mfg. Co., Louisville, Ky.

Pratt—Millers Falls Co., New York, N. Y.

Prier—Prier Brass Mfg. Co., Kansas City, Mo.

Quick Kleaner—Pilley Packing & Fine Brush Mfg. Co., St. Louis, Mo.

Reiter Soot Blower—Reiter Boiler Cleaner Co., Elgin, Ill.

Roto—The Roto Co., Hartford, Conn.

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For removing obstructions from drains and sewer pipes. A combination of mineral elements so intermingled that upon mixture with water, the chemical reaction generates intense heat and powerful gases that disintegrate and liquify the obstruction. Contains no acid. No injury to pipe connections, or enamel ware. Can be used for thawing frozen pipes.

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Swift Correct—Donnegan & Swift, New York, N. Y.

Thompson—Richard Thompson & Co., New York, N. Y.

Tornado—Paul B. Huyette Co., Philadelphia, Pa.

Torpedo—The General Specialty Co., Buffalo, N. Y.

Two-Way—John S. Bushnell & Co., Brooklyn, N. Y.

Underwood, H. B., Corp., Philadelphia, Pa.

Victor—Liberty Mfg. Co., Pittsburgh, Pa.

Vulcan—Ernest E. Lee, Chicago, Ill.

Vulcan Dean—Vulcan Soot Cleaner Sales Co., Chicago, Ill.

Worcester—Worcester Brush & Scraper Co., Worcester, Mass.

♦ Yarway—Yarnall-Waring Co., Philadelphia, Pa.

### CLEANERS BRUSH.

Andersen's—Andersen Specialty Co., Chicago, Ill.

### CLEANERS, CATCH BASIN.

Stebbins Hardware Co., Chicago, Ill.

### CLEANERS, CLOSET BOWL.

K. K.—The Chamberlain Co., Pittsburgh, Pa.

Kem-Klo—Kemoshyne Products, Inc., New York, N. Y.

Poraco—Porcela-Radax Co., New Brighton, Pa.

### CLEANERS, CONDENSER.

Lagonda—Lagonda Mfg. Co., Springfield, O.

Pilley—Pilley Packing & Flue Mfg. Co., St. Louis, Mo.

### CLEANERS, ENGINE.

Romort Mfg. Co., Oakfield, Wis.

### CLEANERS, GRAIN.

(See also "Mach'y, Grain Cleaning.")

Barnard & Leas Mfg. Co., Moline, Ill.

New Fosston—Fosston-Carpenter Co., St. Paul, Minn.

U. S.—The B. S. Constant Mfg. Co., Bloomington, Ill.

Western—Union Iron Works, Decatur, Ill.

Wolf Company, The, Chambersburg, Pa.

### CLEANERS, HEATER AND WATER BACK.

Dehn's—Compound Injector & Specialty Co., Chicago.

### CLEANERS, METAL.

Excelus—International Lubricants Co., Ltd., Evans-ton, Ill.

Ideal Concrete Machinery Co., Cincinnati, Ohio.

Imperial—Rath Mfg. Co., Inc., Philadelphia, Pa.

Munning Co., A. P., Matawan, N. J.

Oakite—Oakley Chemical Co., New York, N. Y.

Rus-Go-Babbitt Steam Specialty Co., New Bedford, Mass.

Standard—Galvanizing Corp. of America, Inc., Brook-lyn, N. Y.

Wyandotte—J. B. Ford Co., Wyandotte, Mich.

### CLEANER, PIPE COIL.

Champion—Chard & Howe, New York, N. Y.

### CLEANER, PORCELAIN, TILE AND MARBLE.

Coleman, Allan J., Chicago, Ill.

Kemoline—Kemoshyne Products, Inc., New York, N. Y.

Kleenatub—Cooper Sanitary Mfg. Co., Philadelphia.

Porcela—The Porcela-Radax Co., New Brighton, Pa.

Shinit—Rochester Chemical Co., Rochester, N. Y.

Skat Kleanser—The Skat Co., Hartford, Conn.

Superior Cleaner—Kohler Co., Kohler, Wis.

### CLEANERS, SEWER AND DRAIN PIPE, CHEMICAL.

B. B. Specialty Co., Pittsburgh, Pa.

Blue Seal—Blue Seal Chemical Co., New York, N. Y.

Coleman, Allan J., Chicago, Ill.

Cooper's Solvent—Cooper Sanitary Mfg. Co., Philadel-phia.

Desolve—The Chamberlain Co., Pittsburgh, Pa.

Hause—Chas. F. Hause Mfg. Co., Inc., Omaha, Neb.

Hercules Chemical Co., Inc., New York, N. Y.

Hydro-Clean—Plunkett Chemical Co., Chicago, Ill.

Ninety-Nine—Chemical Products Co., New York, N. Y.

Plumber's Shooter—Kemoshyne Products, Inc., New York, N. Y.

Relaxo—W. B. McVicker Co., New York, N. Y.

Ritz Chemical Corp., Newark, N. J.

Sanisol—Duplex Mfg. Co., Philadelphia, Pa.

### CLEANERS, SEWER AND DRAIN PIPE, MECHANICAL.

B. B. Specialty Co., Pittsburgh, Pa.

Blue Seal—Blue Seal Chemical Co., Roselle, N. J.

Clear-Awl—Samuel Lewis, New York, N. Y.

Coleman's—Allen J. Coleman, Chicago.

Engel Mfg. Co., Syracuse, N. Y.

Flitcroft Pat.—Otto Bernz, Newark, N. J.

Good Mfg. Co., Inc., New York, N. Y.

Hause—Chas. F. Hause Mfg. Co., Omaha, Neb.

Holland's—Geo. W. Holland, New York, N. Y.

Hymes Pat.—H. Mueller Mfg. Co., Decatur, Ill.

McVicker, W. B., Co., Brooklyn, N. Y.

Magic Plumber—Abbott Hardware Co., New York, N. Y.

Noppel—Garrison Brass & Machine Wks., New York, N. Y.

Pilley—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

Remo Beer Pipe Cleaner—The Baehr Mfg. Co., Clevel-land, O.

Schild—Schild Specialty Co., Cleveland, Ohio.

Sewer Clean—General Mfg. Co., Oil City, Pa.

Starbuck & Sons, R. M., Hartford, Conn.

Talz, Jacob, & Son, Philadelphia, Pa.

Victory—Self Propelling Nozzle Co., New York, N. Y.

Vulcan Tool Mfg. Co., The, Quincy, Mass.

Wolverine Specialty Co., Grand Rapids, Mich.

### CLEANERS, SWIMMING POOL.

Scalfe & Sons Co., Wm. B., Pittsburgh, Pa.

Tuec—The United Electric Co., Canton, O.

### CLEANERS, VACUUM.

Air-Vac—Zimmer Vacuum Renovator Co., Minneapolis, Minn.

Allington & Curtis Mfg. Co., The, Saginaw, Mich.

American Radiator Co., Chicago, Ill. (stationary and truck).

Arco Wand—American Radiator Co., Chicago, Ill.

Challenge—Creamery Package Mfg. Co., Chicago, Ill.

Chicago Pump Co., The, Chicago, Ill.

Clifton—Clifton-Pratt Co., Cincinnati, O.

Economy—Thomas & Smith, Inc., Chicago.

Economy—Pittsburg Gage & Sup. Co., Pittsburg, Pa.

Edison Electric Appliance Co., Inc., Chicago, Ill. (Electric)

Federal—Federal Electric Co., Chicago, Ill.

♦ Garden City—Garden City Fan Co., Chicago, Ill.

Ohio—United Electric Co., Canton, O.

Regina—The Regina Co., New York, N. Y.

Spencer—The Spencer Turbine Co., Hartford, Conn.

Sturtevant, B. F., Co., Hyde Park, Mass.

Thurman—General Compressed Air & Vacuum Ma-chinery Co., St. Louis, Mo.

Tuec—The United Electric Company, Canton, O.

Western Electric—Western Electric Co., Inc., Chicago, Ill.

### CLEANERS, WASTE.

Oakley Chemical Co., New York, N. Y. (oil saver.)

**CLEANERS, WATER CLOSET, CHEMICAL.**

Coleman, Allan J., Chicago, Ill.  
 Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
 Hydro Clean, Sanofarm—Plunkett Chemical Co., Chicago, Ill.  
 Kem-Klo—Kemoshyne Products, Inc., New York, N. Y.  
 K. K.—The Chamberlain Co., Pittsburgh, Pa.  
 Newflect—Blue Seal Chemical Co., Roselle, N. J.  
 Saniflush—Hygienic Products Co., The, Canton, Ohio.

**CLEANERS, WATER MAIN.**

Lawless Force Pump—Newark Brass Wks., Newark, N. J.  
 Maslin—John Maslin & Son, Jersey City, N. J.  
 National Water Main Cleaning Co., New York, N. Y.  
 Redecker System Co., The, Wheeling, W. Va.  
 Tesco Organic Cleaner—Hexter-Stewart Corp., Cleveland, Ohio.

**CLEANERS, WATER SERVICE PIPE.**

Redecker System Co., Wheeling, W. Va.

**CLEANOUT DOORS AND FRAMES, CAST IRON.**

Bignall Co., The, Medina, N. Y.  
 Sanitary Company of America, Linfield, Pa.

**CLEANOUTS, IRON BODY.**

(See "Fittings, Soil Pipe")

Advance, Palmer—Zurn Mfg. Co., Erie, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Chicago Pipe Co., Chicago, Ill.  
 Dandy—The Bignall Co., Medina, N. Y.  
 Richmond Foundry & Mfg. Co., The, Richmond, Va.  
 Sanitary Company of America, Linfield, Pa.

**CLEVISSES.**

Bard Mfg. Co., Royersford, Pa. (pins).  
 Bethlehem Steel Co., Bethlehem, Pa.  
 Hayden-Corbett Chain Co., The, Columbus, O.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 National Malleable Casting Co., Cleveland, Ohio.  
 O'Leary, Arthur J., Sons Co., Chicago, Ill.  
 Stowell Co., The, South Milwaukee, Wis.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

**CLIMBERS, LINEMEN'S.**

(See also "Tools, Linemen's.")

Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 Dick Tool Co., The, Downers Grove, Ill.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Irvington Mfg. Co., Irvington, N. J.  
 Klein—Mathias Klein & Son, Chicago, Ill.  
 Leather Parts Co., Indianapolis, Ind.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
 Sharpen Ezy—The H. D. Smith & Co., Plantsville, Conn.

**CLIPPERS, BOLT, RIVET AND WIRE.**

Allen-Randall—H. K. Porter, Everett, Mass.  
 Ampco—Mann Corporation, Kankakee, Ill.  
 Bonner, C. E., Mfg. Co., Chrisman, Ill.  
 Boston—H. K. Porter, Everett, Mass.  
 Brady, Steck—S. F. Hayward & Co., New York.  
 Carolus—Carolus Mfg. Co., Sterling, Ill.  
 Carolus—W. A. Whitney Mfg. Co., Rockford, Ill.  
 City, N. Y.  
 Easy—H. K. Porter, Everett, Mass.  
 Federal—Crane Puller Co., Arlington, Mass.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Helwig—Helwig Mfg. Co., St. Paul, Minn.  
 Manco—Mann Corporation, Kankakee, Ill.  
 Metal Stamping Co., Long Island City, N. Y.  
 New Easy—H. K. Porter, Everett, Mass.  
 New-Eazy-Handy—Metal Stamping Co., Long Island O. K.—H. K. Porter Co., Everett, Mass.  
 Peck, Stow & Wilcox Co., New York.  
 Rivet Cutting Gun Co., Cincinnati, Ohio.  
 Roberts Mfg. Co., Somerville, Mass.  
 Special—H. K. Porter, Everett, Mass.  
 Victor—Roberts Mfg. Co., Somerville, Mass.

**CLIPPERS, ROD.**

Union—Union Mfg. Co., New Britain, Conn.

**CLIPS, AXLE AND SPRING.**

E. D. Clapp Mfg. Co., Auburn, N. Y.  
 Columbus Bolt Works Co., Columbus, Ohio.  
 Franklin Moore Co., Winsted, Conn.  
 Scranton Forging Co., Scranton, Pa.  
 Unson Nut Co., The, Cleveland, O.  
 Williams, J. H., & Co., Brooklyn, N. Y.

**CLIPS, SPRINKLER.**

Kelly & Jones Co., The, Greensburg, Pa.  
 Newbury, Jay H., & Son, Goshen, N. Y.  
 Pittsburg Valve & Fittings Co., Barborton, O.  
 Walworth Mfg. Co., Boston, Mass.

**CLIPS, WIRE ROPE.**

(See "Fittings, Wire Rope.")

♦ Bull Dog—The Lamson & Sessions Co., Cleveland, O.  
 Fischer & Hayes Rope & Steel Company, Chicago, Ill.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Wood, J. R., Supply Co., Cincinnati, Ohio.

**CLOCKS, ELECTRIC.**

Boston Eco—Eco Clock Co., Boston, Mass.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Howard, E., Clock Co., Boston, Mass.  
 P-R—Pettes & Randall Co., New York, N. Y.  
 Warren Clock Co., Ashland, Mass.

**CLOCKS, ENGINE ROOM.**

♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ansonia Clock Co., New York.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Bristol's—Bristol Co., The, Waterbury, Conn.  
 Crosby Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Federal Gauge Co., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Howard Clock Co., E., Boston, Mass.  
 Lonerger—Lonerger Co., J. E., Philadelphia, Pa.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Thomas, Seth, Clock Co., New York, N. Y.  
 ♦ United States Gauge Co., New York, N. Y.  
 Waterbury Clock Co., Waterbury, Conn.

**CLOCKS, FURNACE AND BOILER.**

Tidey—Tidey Heat Specialties Co., New York, N. Y.  
 Tillery's Little Janitor Clock Co., Newark, N. J.

**CLOCKS, MARINE.**

Foxboro Co., Inc., The, Foxboro, Mass.  
 Howard Clock Co., E., Boston, Mass.  
 Lonerger—Lonerger Co., J. E., Philadelphia, Pa.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 National Gauge Co., Brooklyn, N. Y.  
 United States Gauge Co., New York, N. Y.

**CLOCKS, TIME.**

Monitor Time Clock Co., Syracuse, N. Y.  
 Periodograph—Gisholt Machine Co., Madison, Wis.  
 Pettes & Randall Co., New York.

**CLOCKS, WATCHMAN'S PORTABLE.**

Alert—Hardinge Bros., Inc., Chicago, Ill.  
 American Watchman's Time Detector Co., Cleveland, Ohio.  
 Boston Eco—Eco Clock Co., Boston, Mass.  
 Chicago Watchman's Clock Works, Chicago.  
 Cleveland—Pettes & Randall Co., New York.  
 Eco—Eco Clock Co., Boston, Mass.  
 Howard Clock Co., E., Boston, Mass.  
 Newman Grille—Newman Clock Co., New York, N. Y.  
 Patrol—Hardinge Bros., Inc., Chicago, Ill.  
 Rowe, A. C., & Son, Inc., New York.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 Simplex—Simplex Time Recorder Co., Gardner, Mass.  
 Standard Electric Time Co., Waterbury, Conn.

**CLOCKS, WATCHMAN'S, STATIONARY.**

Chicago Watchman's Clock Works, Chicago, Ill.  
 Grille—Newman Clock Co., New York.

**CLOSETS, BACK WATER—BASEMENT**

Martin—Martin, Fort Wayne, Ind.

**CLOSETS, CHEMICAL.**

Cent-Les—Independent Register & Mfg. Co., Cleveland, O.  
 Economy—Sanitary Chemical Closet Co., Hillsdale, Mich.  
 Hart—Hart Mfg. Co., The, Louisville, Ky.  
 Ideal—Ideal Metallic Furniture Co., Detroit, Mich.  
 Kaustine—Kaustine Company, Inc., Buffalo, N. Y.  
 Night Commander Lighting Co., Jackson, Mich.  
 Ro-San—Rowe Sanitary Mfg. Co., Detroit, Mich.  
 Rowe Sanitary Mfg. Co., Detroit, Mich.  
 Shafer Mfg. Co., Leipsic, Ohio.  
 Sheldon Engine & Sales Co., Waterloo, Iowa.  
 Smith—Smith System Heating Co., Minneapolis, Minn.  
 Stephenson, C. H., Lynn, Mass.  
 United Engine Co., Lansing, Mich.  
 Waterman-Waterbury Co., Minneapolis, Minn.  
 Wolverine—Dall Steel Products Co., Lansing, Mich.

**CLOSETS, DRY BATH.**

Heap & Sons, Wm., Grand Haven, Mich.  
 Kenney—The Kenney Mfg. Co., New York, N. Y.  
 Perfect—Thos. E. Morgan, Grand Forks, N. D.  
 The Stephenson—C. H. Stephenson, Lynn, Mass.



**CLOSETS, HOPPER, FROST PROOF.**

Johnson, J. D., Co., Philadelphia, Pa.  
 Vogel Patent—Vogel, Jos. A., Co., Wilmington, Del.  
 Weiskittel, A. & Son Co., Baltimore, Md.

**CLOSETS, PORTABLE.**

Kaustine—Kaustine Company, Inc., Buffalo, N. Y.  
 Peck-Hammond Co., The, Cincinnati, O.  
 Stephenson—C. H. Stephenson, Lynn, Mass.

**CLOTH, ASBESTOS.**

Allbestos Corporation, Philadelphia, Pa.  
 Asbestos—American Asbestos Co., Norristown, Pa.  
 Asbestos Textile Co., Inc., New York, N. Y.  
 Asbestos Fibre Spinning Co., North Wales, Pa.  
 Asbestos & Rubber Works of America, New York.  
 Atlantic Asbestos Co., Philadelphia, Pa.  
 Dominion—Dominion Asbestos and Rubber Corp., New York.  
 Garco—General Asbestos & Rubber Co., Charleston, S. C.  
 J.-M.—Johns-Manville, Inc., New York, N. Y.  
 Keasbey & Mattison Co., Ambler, Pa.  
 Kern Commercial Co., New York.  
 Mikesell Brothers Co., Chicago, Ill.  
 National Asbestos Co., Germantown, Phila., Pa.  
 Usaco—United States Asbestos Co., Manheim, Pa.  
 Vulcan Asbestos Mfg. Co., Inc., New York.  
 Waite-Wild Asbestos Co., Framingham, Mass.  
 Watson, H. F., Erie, Pa.

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 Upson-Walton Co., The, Cleveland, O. (Imported).

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(See "Paper and Cloth, Emery.")

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 Wheeler Mfg. Co., F. H., Chicago, Ill.

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Perfection Tire & Rubber Co., Wabash, Ind.  
 Shriver—Shriver, T. & Co., Harrison, N. J.

**CLOTHS, MACHINERY WIPING.**

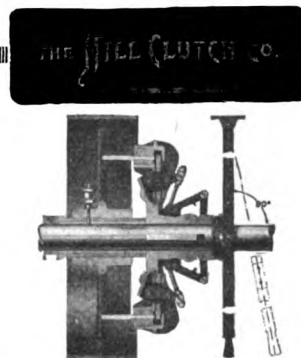
American Supply Co., Chicago, Ill.  
 Baylis Sanitary Supply Co., Chicago, Ill.  
 Clapp, Henry D. B., & Co., Inc., Philadelphia, Pa.  
 Columbus Washed & Sterilized Wiper Co., Columbus, Ohio.  
 Economy Wiping Material Co., New York, N. Y.  
 Fidelity Brand—J. Milton Hagy Waste Works, Philadelphia, Pa.  
 Fitts, Frank E., Mfg. & Sup. Co., Boston, Mass.  
 Frankford Waste Co., Philadelphia, Pa.  
 Gumbinsky Bros. Co., Chicago, Ill.  
 Hoffman-Corr Mfg. Co., New York, N. Y.  
 Massolt Mfg. Co., Fall River, Mass.  
 Ohio Sanitary Wipers Co., Toledo, O.  
 Oil and Waste Saving Machine Co., Philadelphia, Pa.  
 Robinson, D., & Sons, Detroit, Mich.  
 Royal—Royal Mfg. Co., Rahway, N. J.  
 Royal Waste Co., Boston, Mass.  
 Sanitary Washed Wiper Co., Inc., Indianapolis, Ind.  
 San-Knit—San-Knit Wipers Co., St. Louis, Mo.  
 Scheinman, I. L., & Co., Detroit, Mich.  
 Standard Waste Mfg. Co., Cleveland, O.

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 Frank Bros., New York, N. Y.  
 Johnson, Wm., Newark, N. J.  
 National Tool Co., Brooklyn, N. Y.  
 Nye—Nye Tool & Machine Works, Chicago, Ill.  
 San-Knit—Standard Waste Mfg. Co., Cleveland, O.  
 Smooth Wiper—Kemoshyne Products, Inc., New York.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Wood, W. A., Co., Boston, Mass.  
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 Wolf Co., The, Chambersburg, Pa.

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 Baldridge—The Brown Clutch Co., Sandusky, O.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Belden Mfg. Co., Fremont, Ohio.  
 Bond Foundry & Machinery Co., Manheim, Pa.  
 Brightman Machine Co., Cleveland, O.  
 Brown—Brown Clutch Co., Sandusky, O.  
 Brown—A. & F. Brown Co., New York, N. Y.  
 Brown Engineering Co., Reading, Pa.  
 Bull Dog—Blair Mfg. Co., Camden, N. J.  
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 Caldwell & Son Co., H. W., Chicago, Ill.  
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- ◆ **Cleveland**—The Reliance Gauge Column Co., Cleveland, O.  
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- ◆ **Dodge Solid**—Dodge Sales & Engineering Co., Mishawaka, Ind.
- Dow, L. B., Inc., Keene, N. H.  
 Eclipse—Fairbanks, Morse & Co., Chicago, Ill.  
 Edgemont—Edgemont Machine Co., Dayton, O.  
 E. G. I.—Brown Engineering Co., Reading, Pa.  
 Empire—Thomas Coupling Co., Warren, Pa.  
 Erie Standard—Erie Clutch & Pulley Co., Erie, Pa.  
 Evans—T. F. Evans, Newton Center Mass.  
 Falls—Falls Clutch & Machinery Co.—Cuyahoga Falls, Ohio.  
 Farrell Foundry & Machine Co., Ansonia, Conn.  
 Frisbie—Eastern Machinery Co., New Haven, Conn.  
 Hanson—Hanson Clutch & Machinery Co., Tiffin, O.  
 Hess-Bright Mfg. Co., Philadelphia, Pa.  
 Hess-Snyder Co., The, Massillon, O.  
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 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hunter—Jas. Hunter & Machine Co., North Adams, Mass.
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- ◆ **Jeffrey**—Jeffrey Mfg. Co., Columbus, O.  
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 Karge System, Inc., Phoenix, N. Y.  
**Kinney—Kinney Mfg. Co.**, Boston, Mass.
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 Link-Belt Company, Chicago and Philadelphia.  
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- ◆ **Medart Patent Pulley Co.**, St. Louis, Mo.  
 Milwaukee Shaper Co., Milwaukee, Wis.  
 Minster Machine Co., The, Minster, O.  
 Mollenberg-Betz Machine Co., Inc., Buffalo, N. Y.  
 Monarch-Peerless—Sprout, Waldron & Co., Muncy, Pa.  
 Moore-Master Mfg. Co., Chicago, Ill.
- ◆ **Moore & White Co.**, The, Philadelphia, Pa.  
 Muir-Miller—Geo. W. Pyott Co., Chicago, Ill.  
 Mule-Pull—Brown Engineering Co., Reading, Pa.  
 Muncie—Muncie Oil Engine Co., Muncie, Ind.  
 National—Geo. W. Pyott Co., Chicago, Ill.  
 New Era—Portsmouth Engine Co., Portsmouth, O.  
 ◆ **Nordyke & Marmon Co.**, Indianapolis, Ind.  
 Oesterlein—Oesterlein Machine Co., The, Cincinnati, Ohio.  
 O. K.—O. K. Clutch & Machinery Co., Columbia, Pa.  
 Passman Bros., Chicago, Ill.  
 Peerless—Essemueller Mill Furnishing Co., St. Louis, Mo.  
 Perfection—Wheaton, C. M., Providence, R. I.  
 Plamondon—Plamondon Mfg. Co., Chicago, Ill.  
 Porter Machine Co., Wooster, O.  
 Production Machine Co., Greenfield, Mass.
- ◆ **Pyott, Geo. W. Co.**, The, Chicago, Ill.  
 ◆ **The Reeves—Reeves Pulley Co.**, Columbus, Ind.  
 S-A—Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Schultz, A. L. & Son, Chicago, Ill.  
 Shaffer Clutch—Mollenberg-Betz Machine Co., Buffalo, N. Y.  
 Sinclair-Scott Co., The, Baltimore, Md.  
 ◆ **Smith Type**—The Hill Clutch Co., Cleveland, O.

- Springfield—Springfield Gas Engine Co., Springfield, O.  
 Star—Carl G. Westlund Co., Worcester, Mass.  
 Tester—Decatur Foundry, Furnace & Machine Co., Decatur, Ind.
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 U. S.—The B. S. Constant Mfg. Co., Bloomington, Ill.
- ◆ **Webster Mfg. Co.**, Chicago, Ill.  
 Weller Mfg. Co., Chicago, Ill.  
 Westlund—Westlund, Carl G. Co., Worcester, Mass.  
 Whitman—Meese & Gottfried Co., San Francisco, Cal.  
 Wolf Co., The, Chambersburg, Pa.  
 Worrall—Kinney Mfg. Co., Boston, Mass.  
 Worrall—American Tool & Machine Co., Boston, Mass.

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 ◆ **Chapman—Transmission Ball Bearing Co., Inc.**, Buffalo, N. Y.  
 S. K. F. Industries, Inc., New York, N. Y.  
 Wolf Co., The, Chambersburg, Pa.  
 Wood's Sons Co., T. B., Chambersburg, Pa.

#### CLUTCHES, FRICTION, COUNTERSHAFT.

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 Standard—Erie Clutch & Pulley Co., Erie, Pa.

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- Brown Engineering Co., Reading, Pa.  
 Brown—The Brown Clutch Co., Sandusky, O.  
 Empire—Thomas Coupling Co., Troy, Pa.  
 Falls—Falls Clutch & Machinery Co., Cuyahoga Falls, Ohio.  
 Hanson Clutch & Machine Co., Tiffin, O.  
 ◆ **Hilliard Clutch & Machinery Co.**, Elmira, N. Y.  
 ◆ **Hill (Smith Type)**—Hill Clutch Co., Cleveland, O.  
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 ◆ **Lemley**—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Meeseco—Meese & Gottfried Co., San Francisco, Cal.  
 Minster Machine Co., Minster, O.  
 Moore-Master Mfg. Co., Chicago, Ill.  
 Mule-Pull Clutch Co., The, Sandusky, O.  
 M. & G.—Muncie Oil Engine Co., Muncie, Ind.

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(See also Coupling, Shaft, Jaw Clutch.)

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 Hanson Clutch & Machine Co., Tiffin, O.  
 ◆ **Jones**—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Link-Belt Company, Chicago, Ill.  
 ◆ **Medart Patent Pulley Co.**, St. Louis, Mo.  
 Wolf Co., The, Chambersburg, Pa.

#### CLUTCHES, LINE SHAFT.

(See also "Machinery, Power Transmission.")

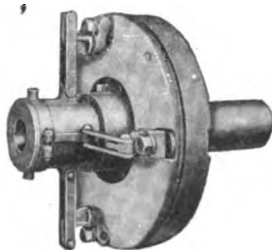
- ◆ **Hilliard**—Hilliard Clutch & Machinery Co., Elmira, N. Y.  
**Kinney—Kinney Mfg. Co.**, Boston, Mass.  
 Link-Belt Company, Chicago and Philadelphia.

#### CLUTCHES, SAFETY, ELECTRIC.

Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
 Hagman Machine Works, Syracuse, N. Y.

#### COATING, ACID AND ALKALI PROOF.

Federal Process Co., Cleveland, Ohio.

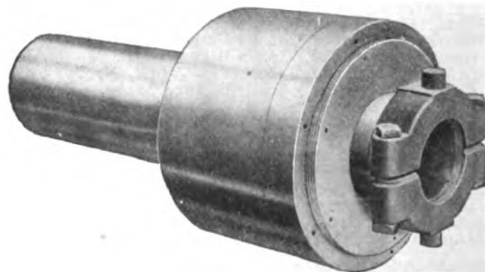


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**Boston, Mass.**



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 Standard Chemical Corp., Kalamazoo, Mich.  
 Vulcan-Lastite—Vulcan Fuel Economy Co., Chicago, Ill.

**COATING, GEAR.**

Acme—Acme Refining Co., The, Cleveland, O.  
 Damascus—Damascus Mfg. Co., Cleveland, Ohio.  
 Standard Chemical Corp., Kalamazoo, Mich.

**COATING, UNDERGROUND PIPE.**

National—National Tube Co., Pittsburgh, Pa.

**COCKS, ACID METAL.**

Duriron—Duriron Co., Inc., The, Dayton, O.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Perkes, Chas., Estate, Philadelphia, Pa.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Simmons Co., John, New York, N. Y.  
 Walworth Mfg. Co., Boston, Mass.

**COCKS, AIR.**

(See also "Valves, Air" and "Valves, Radiator Air.")

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 American—American Injector Co., Detroit, Mich.  
 American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 American Brass & Copper Co., The, New York, N. Y.  
 American Lubricator Co., Detroit, Mich.  
 American Safety Lamp & Mine Supply Co., Scranton.  
 Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 Bishop & Babcock Co., Cleveland, Ohio.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Canton Brass Co., The, Canton, O.  
 C. C.—Crane Co., Chicago, Ill.  
 Cleveland Faucet Co., The, Cleveland, O.  
 Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Edelman—E. Edelman & Co., Chicago, Ill.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Essex Brass Corp., Detroit, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Farnan Brass Works Co., The, Cleveland, O.  
 Flannery, F. J., Co., New Britain, Conn.  
 Fries & Co., Buffalo, N. Y.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hancock Mfg. Co., Charlotte, Mich.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Hills-McCanna Co., Chicago, Ill.  
 Homestead Valve Mfg. Co., Homestead, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Johnson Service Co., Milwaukee, Wis.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlan Mfg. Co., New York, N. Y.  
 McRae & Roberts Co., Detroit, Mich.  
 Michigan—Michigan Lubricator Co., Detroit, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Penberthy Injector Co., Detroit, Mich.  
 Peninsular Brass Works, Detroit, Mich.  
 Penn—The Penn Engineering Co., Philadelphia, Pa.  
 Perkes, Charles, Co., The, Philadelphia, Pa.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.  
 Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Standard Brass Works, Detroit, Mich.  
 Standard Brass & Iron, Milwaukee, Wis.  
 Standard—The Standard Gauge Mfg. Co., Foxboro, Mass.  
 Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 Swift—The Swift Lubricator Co., Elmira, N. Y.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Walworth Mfg. Co., Boston, Mass.  
 Westinghouse Traction Brake Co., Pittsburgh, Pa.

**COCKS, ALCOHOL.**

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 Improved Appliance Co., Brooklyn, N. Y.

**COCKS, AMMONIA.**

(See also "Valves, Ammonia.")

**COCKS, ANGLE.**

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 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Homestead Valve Mfg. Co., Homestead, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Lukomski Brothers Co., Detroit, Mich.  
 McDonald Co., A. Y., Dubuque, Ia.  
 McRae & Roberts Co., The, Detroit, Mich.

Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Pittsburg Valve & Fittings Co., Barberton, O.  
 Pratt & Cady Co., Inc., Hartford, Conn.  
 Walworth Mfg. Co., Boston, Mass.

**COCKS, ASBESTOS PACKED.**

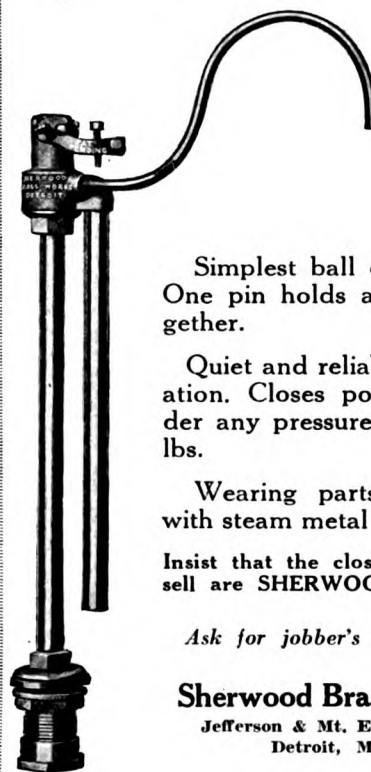
Best—Best Mfg. Co., Pittsburg, Pa.  
 Judson Governor Co., The, Rochester, N. Y.  
 P. & C.—The Pratt & Cady Co., Inc., Hartford, Conn.  
 Sterling & Skinner Mfg. Co., Detroit, Mich.

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 Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Essex Brass Corp., Detroit, Mich.  
 McRae & Roberts Co., Detroit, Mich.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.

**COCKS, BALL.**

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 A. L.—Exeter Brass Works, Exeter, N. H.  
 Alliance Brass Foundry, Detroit, Mich.  
 Alva—McCambridge Co., Philadelphia, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.  
 ARR—Union Metal Works, Chelsea, Mass.  
 B B—Boston Brass Co., Boston, Mass.  
 Bay State Brass Co., Haydenville, Mass.  
 Belknap Mfg. Co., Bridgeport, Conn.  
 Blake's—Blake Hydraulic Valve Corp., Boston, Mass.  
 Bronx—Boston Brass Co., Waltham, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Central Brass Mfg. Co., Cleveland, O.  
 Clark—W. J. Hyland Mfg. Co., Springfield, Mass.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Common—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Coyne & Delany Co., Brooklyn, N. Y.  
 Dale—Wolverine Brass Works, Grand Rapids, Mich.  
 Dewey—Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Diaphragm—The Columbus Brass Co., Columbus, O.  
 Duplex—F. W. Webb Mfg. Co., Boston, Mass.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Engel—Engel Mfg. Co., Syracuse, N. Y.  
 Everhart Brass Works, Scranton, Pa.  
 Excelsior—Robertshaw Mfg. Co., Youngwood, Pa.  
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No. 66  
Ballcock**

Simplest ball cock made.  
 One pin holds all parts together.

Quiet and reliable in operation.  
 Closes positively under any pressure up to 150 lbs.

Wearing parts of bronze with steam metal seat.

Insist that the closet tanks you sell are SHERWOOD equipped.

Ask for jobber's proposition.

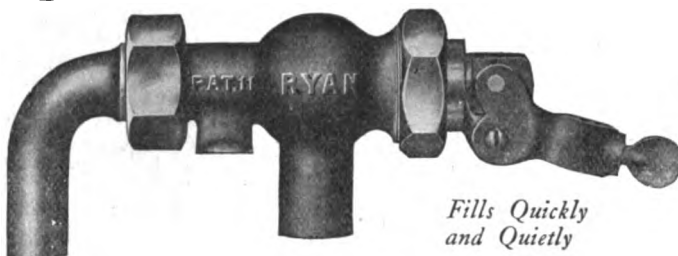
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Jefferson & Mt. Elliott Aves.  
 Detroit, Mich.

# Ryan's High and Low Pressure Ball Cock

Possesses exclusive features that make it in every way superior. Endorsed by the largest buyers.

Has removable seat of best material. Half a turn of the plunger shuts off water when making repairs. No screws to remove. Direct line bearing on plunger and great leverage insures positive shut-off.



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**N. H. Tank Valves. Brass Goods for Water, Steam and Gas**

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Gopher—Union Brass & Metal Mfg. Co., St. Paul.

Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.

Haydenville Co., The, Haydenville, Mass.

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Hogan—The Hogan Mfg. Co., Hartford, Conn.

Ideal—Tillotson Humidifier Co., Providence, R. I.

Inbraco—Indiana Brass Co., The, Frankfort, Ind.

James Mfg. Co., Canton, Ohio.

L. B.—L. B. Brass Co., Peabody, Mass.

Lipp, Louis, Co., Cincinnati, Ohio.

Mansfield—Acheson Mfg. Co., Braddock, Pa.

Mansfield—Robertshaw Mfg. Co., Youngwood, Pa.

McGraw—R. McGraw, Syracuse, N. Y.

McNab & Harlin Mfg. Co., New York, N. Y.

Miller, Charles A., Co., Sturgis, Mich.

Monarch—The Monarch Brass Co., Cleveland, O.

M.-V. B.—Morency-Van Buren Mfg. Co., Sturgis, Mich.

M. V.—Maine Valve Co., Solon, Me.

National—National Steam Specialty Co., Chicago.

Neff Aetna—Geo. W. Neff & Co., New York, N. Y.

Nelson, N. O., Mfg. Co., St. Louis, Mo.

New Jersey Tube Co., New York.

N. C.—Joseph H. Young Co., Boston, Mass.

N. H.—Exeter Brass Works, Exeter, N. H.

Northern Tool Co., Inc., Utica, N. Y.

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♦ Ohio, Standard—The Ohio Brass Co., Mansfield, O.

Paragon—Vulcan Brass Mfg. Co., Cleveland, Ohio.

Parkinson—The Parkinson Mfg. Co., Ashland, O.

P. B. H.—The Paul B. Huyette Co., Philadelphia, Pa.

Peerless Tank & Seat Works, Evansville, Ind.

Pfaw—The Pfaw Mfg. Co., Cincinnati, O.

Powhatan Brass & Iron Works, Ranson, W. Va.

♦ Reliance—The Reliance Gauge Column Co., Cleveland, O.

Rival—A. Y. McDonald Mfg. Co., Dubuque, Ia.

R. & F.—Ryan & Fitzpatrick, Inc., Troy, N. Y.

Rockford Brass Works, Rockford, Ill.

Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.

Ryan—Exeter Brass Works, Exeter, N. H.

Sacramento—W. T. Garrett & Co., San Francisco, Cal.

Sherwood Mfg. Co., Buffalo, N. Y.

No. 66—Sherwood Brass Works, Buffalo, N. Y.

Standard Brass Works, Detroit, Mich.

Standard—Standard Gauge Mfg. Co., Foxboro, Mass.

Sterling—Sterling Specialty Co., Newcomerstown, Ohio.

Success—Sherwood Brass Works, Detroit, Mich.

♦ Swartwout—Ohio Blower & Body Co., Cleveland, O. (regrinding).

Sylento—Woodward-Wanger Co., Philadelphia, Pa.

Syracuse Faucet & Valve Co., Syracuse, N. Y.

Trenton Brass & Machine Co., The, Trenton, N. J.

Try-Me—U. T. Co.—Try Me Mfg. Co., Westfield, Mass.

Tuxeda—Franklin Williams, New York, N. Y.

Union Brass & Metal Mfg. Co., St. Paul, Minn.

United States Gauge Co., New York, N. Y.

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VanArCo—Van Arnam Mfg. Co., Ft. Wayne, Ind.

♦ Victor—McRae & Roberts Co., Detroit, Mich.

♦ Walworth Mfg. Co., Boston, Mass.

Ward-Curley-Sanitas—Sanitas Mfg. Co., Boston, Mass.

Waterbury Mfg. Co., Waterbury, Conn.

Webco—F. W. Webb Mfg. Co., Boston, Mass.

Williams—The Williams Gauge Co., Pittsburg, Pa.

Williams & Son, E. A., Jersey City, N. J.

Willbonco—Jerguson Mfg. Co., Boston, Mass.

Wolff Mfg. Co., Chicago, Ill.

Wright Mfg. Co., Detroit, Mich.

Z-B—Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.

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Wolff Mfg. Co., Chicago, Ill.

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♦ Kelly & Jones Co., The, Greensburg, Pa.

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Perkes, Chas., Co., Philadelphia, Pa.

Ryan—Exeter Brass Works, Exeter, N. H.

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American Pin Co., The, Waterbury, Conn.

B. B.—Boston Brass Co., Waltham, Mass.

Hogan—The Hogan Mfg. Co., Hartford, Conn.

Jones A-1—O. H. Jones, Hartford, Conn.

♦ McRae & Roberts Co., Detroit, Mich.

NevRiek—F. W. Foster & Sons Co., Boston, Mass.

New Jersey Tube Co., New York.

Paragon—Vulcan Brass Mfg. Co., Cleveland, Ohio.

Perkes, Chas., Co., Philadelphia, Pa.

Pittsburgh—Woodward-Wanger Co., Philadelphia, Pa.

Ryan—Exeter Brass Works, Exeter, N. H.

Union Brass & Metal Mfg. Co., St. Paul, Minn.

U. S.—Julian d'Este Co., Boston, Mass.

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B. B.—Boston Brass Co., Waltham, Mass.

NevRiek—F. W. Foster & Sons Co., Boston, Mass.

Ryan—Exeter Brass Works, Exeter, N. H.

Union Brass & Metal Mfg. Co., St. Paul, Minn.

## COCKS, BALL, SELF-CLOSING.

Boston—L. Wolff Mfg. Co., Chicago, Ill.

## COCKS, BARBER SLAB, FULLER AND COMPRESSION COMBINED.

Baby Excelsior, Ronjo, Saxon—J. D. Johnson Co., Philadelphia.

Haydenville Co., The, Haydenville, Mass.

Ryan & Co., J. J., Chicago, Ill.

S & K Rainbow—Street & Kent Mfg. Co., Chicago, Ill.

## COCKS, BASIN AND BATH, CONCEALED.

Sherwin—Goets Brass Co., Chicago, Ill.

Quatern—The Chicago Faucet Co., Chicago, Ill.

## COCKS, BASIN, BRACKET.

Haydenville Co., The, Haydenville, Mass.

Hoffmann & Billings Mfg. Co., Milwaukee, Wis.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

Milwaukee Brass Mfg. Co., Milwaukee, Wis.

Rundle Mfg. Co., Milwaukee, Wis.

Ryan & Co., J. J., Chicago, Ill.

Street & Kent Mfg. Co., Chicago, Ill.

Union Brass & Metal Mfg. Co., St. Paul, Minn.

Wolff Mfg. Co., Chicago, Ill.

**Compression Work**

Bibbs  
Basin Cocks  
Bath Cocks  
Boiler Drains  
Sill Cocks  
Lav. Stops  
Stops  
Stops and Wastes  
Wash Tray Bibbs

**Fuller Work**

Bibbs and  
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Get away from obsolete, discarded patterns. Place your orders for plumbers' brass goods with a concern that is up-to-the-minute and knows the requirements of the trade in all sections of the country. Our specialties include—

Chicago Pattern Stops      Brooklyn Pattern      Philadelphia  
and Waste and Curb Cocks      Stops and Stops and Waste      Hydrant Cocks

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Gas Service Cocks  
Hydrant Cocks  
Lard Tank Cocks  
Patent Cap Work  
Steam Cocks  
Stops  
Stops and Wastes

**Globe Valves**

Angle Valves  
Trap Screws

**COCKS (OR BIBBS), BASIN, GROUND KEY.**

- American Brass Mfg. Co., The, Cleveland, O.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Anglyn—Angster & Lynch, Newark, N. J.
- Arno—Street & Kent Mfg. Co., Chicago, Ill.
- Brighton—The Meyer-Sniffen Co., New York, N. Y.
- Elgin Brass Co., Cleveland, O.
- Fries & Co., Buffalo, N. Y.
- Gibson Bros. Mfg. Co., North Chicago, Ill.
- Haydenville Co., The, Haydenville, Mass.
- Hays Mfg. Co., Erie, Pa.
- Hessley Brass Foundry Co., Peter, Evansville, Ind.
- Hoffmann & Billings Mfg. Co., Milwaukee, Wis.
- Kelly & Jones Co., Greensburg, Pa.
- Kitson Co., Philadelphia, Pa.
- Kruecke Bros. Mfg. Co., Milwaukee, Wis.
- Landers, Frary & Clark, New Britain, Conn.
- National—National Brass Mfg. Co., Rochester, N. Y.
- Okay—E. Stebbins Mfg. Co., Springfield, Mass.
- Perkes, Chas., Co., Philadelphia, Pa.
- Powell, Wm., Co., The, Cincinnati, O.
- Royal Brass Mfg. Co., Cleveland, Ohio.
- Savill & Sons, Thomas, Philadelphia, Pa.
- The Peck Bros. & Co., New Haven, Conn.
- Wolff Mfg. Co., Chicago, Ill.

**COCKS, BASIN, PEDAL.**

- Gaylord Sanitary Mfg. Co., New York, N. Y.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.
- Sanitas—Sanitas Mfg. Co., Boston, Mass.
- Saxon—J. D. Johnson Co., Philadelphia, Pa.
- Speakman Co., Wilmington, Del.

**COCKS (AND BIBBS), BASIN, SINK, ETC., COMPRESSION.**

- Acme—Acme Brass Works, Detroit, Mich.
- Acme—The Haydenville Co., Haydenville, Mass.
- Aegyle, Midget, Ronjo, Saxon, Vigilant—J. D. Johnson Co., Philadelphia, Pa.
- Alpha—The Meyer-Sniffen Co., New York, N. Y.
- American Brass & Copper Co., The, New York, N. Y.
- American Brass Mfg. Co., The, Cleveland, O.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Anglyn—Angster & Lynch, Newark, N. J.
- Apex—F. N. Dubois & Co., New York, N. Y.
- Apex Mfg. Co., Cleveland, O.
- Argyle—Peck Bros. & Co., New Haven, Conn.
- Arno—Street & Kent Mfg. Co., Chicago, Ill.
- Atkinson, The, Co., Rochester, N. Y.
- Atlas Brass Mfg. Co., Cleveland, O.
- Barona, Cornova—Peck Bros. & Co., New Haven, Conn.
- Bashlin—The Bashlin Co., Warren, Pa.
- Bay State Brass Co., Haydenville, Mass.
- Belmont—F. W. Webb Mfg. Co., Boston, Mass.
- Bronx—J. L. Mott Iron Wks., Trenton, N. J.
- Buffalo—Fries & Co., Buffalo, N. Y.
- Burlington—Burlington Brass Works, Burlington, Wis.
- Canton—F. W. Webb Mfg. Co., Boston, Mass.
- Capitol Brass Works, Detroit, Mich.
- Clipper—McCambridge Co., Philadelphia.
- Cochrane, J. A. Brass Mfg. Co., The, Cleveland, O.
- Colonial—Detroit Sanitary Supply Co., Detroit, Mich.
- Corliss—Hoffman & Billings Mfg. Co., Milwaukee, Wis.
- Cycle—Crane Co., Chicago, Ill.
- D. C. Mfg. Co., The, Canton, O.
- Dearborn Brass Co., Cedar Rapids, Iowa.
- Dick Bros., Inc., Reading, Pa.
- Dubois & Co., F. N., New York, N. Y.
- Edwardsville Brass Co., Edwardsville, Ill.
- Elgin Brass Co., Cleveland, Ohio.
- Eljer Co., Cameron, W. Va.
- Empire—The Empire Brass Mfg. Co., Cleveland, O.
- Essex—F. W. Webb Mfg. Co., Boston, Mass.
- Exeter Brass Works, Exeter, N. H.
- Extra Pattern—Wolff Mfg. Co., Chicago, Ill.
- Farnan Brass Works Co., The, Cleveland, O.
- Faultless—J. J. Ryan & Co., Chicago, Ill.
- Federal-Huber Co., Chicago, Ill.

- Flannery Co., P. J., New Britain, Conn.
- Fuller—Federal-Huber Co., Chicago, Ill.
- Garrett & Co., W. T., San Francisco, Cal.
- Gem Brass Mfg. Co., Cleveland, Ohio.
- Gibson Bros. Mfg. Co., North Chicago, Ill.
- Glauber Brass Mfg. Co., Cleveland, O.
- Globe Brass Mfg. Co., The, Cleveland, O.
- Gloria—Detroit Sanitary Supply Co., Detroit, Mich.
- Gopher—Union Brass & Metal Mfg. Co., St. Paul, Minn.
- Gov't—Federal-Huber Co., Chicago, Ill.
- Grundy—The Peck Bros. & Co., New Haven, Conn.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.
- Hamilton Brass Works, Bridgeport, Conn.
- Harlem—J. L. Mott Iron Wks., Trenton, N. J.
- Hays Mfg. Co., Erie, Pa.
- Hoffmann & Billings Mfg. Co., Milwaukee, Wis.
- Humphryes Mfg. Co., The, Mansfield, O.
- Kelly & Jones Co., Greensburg, Pa.
- Kilbourne—Hempstead Brass Co., Hempstead, L. I.
- Kruecke Bros. Mfg. Co., Milwaukee, Wis.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- McMee & Roberts Co., The, Detroit, Mich.
- McShane Bell Foundry Co., Baltimore, Md.
- Melrose—F. W. Webb Mfg. Co., Boston, Mass.
- Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- Monarch—Monarch Brass Co., The, Cleveland, O.
- Mueller Mfg. Co., H., Decatur, Ill.
- Nelson, N. O., Mfg. Co., St. Louis, Mo.
- Neptune—Fleck Bros. Co., Philadelphia, Pa.
- Nopack—Nopack Brass Mfg. Co., Du Bois, Pa.
- Northern Brass Mfg. Co., Waukegan, Ill.
- Oberndorf Mfg. Co., The, Pittsburgh, Pa.
- Okay—E. Stebbins Mfg. Co., Springfield, Mass.
- Paragon—Vulcan Brass Mfg. Co., Cleveland, O.
- Park & McKay Co., The, Detroit, Mich.
- Peck Bros. & Co., The, New Haven, Conn.
- Pemberton—The Meyer-Sniffen Co., New York, N. Y.
- Penn Brass Mfg. Co., Cleveland, O.
- Penn—Detroit Sanitary Supply Co., Detroit, Mich.
- Penn—East Penn Foundry Co., Macungie, Pa.
- Perfect—Kitson Co., Philadelphia, Pa.
- Perkes, Chas., Co., Philadelphia, Pa.
- Pilot—Cooper Sanitary Mfg. Co., Philadelphia, Pa.
- Powhatan Brass & Iron Wks., Charleston, W. Va.
- Presto—Rickersberg Brass Co., Cleveland, O.
- Prier Brass Mfg. Co., The, Kansas City, Mo.
- Quatern—Chicago Faucet Co., The, Chicago, Ill.
- Quick-Ope—Haydenville Co., Haydenville, Mass.
- Rabbitt Ear—F. N. Dubois & Co., New York, N. Y.
- Red Label—Peck Bros. & Co., New Haven, Conn.
- Regle Brass Co., Greenville, Mich.
- Richter—Richter & Co., Cincinnati, O.
- Rick Presto—The Rickersberg Brass Co., Cleveland, O.
- Roberts Brass Mfg. Co., Detroit, Mich.
- Rochester—The Atkinson Co., Rochester, N. Y.
- Royal Brass Mfg. Co., Cleveland, O.
- Rundle Mfg. Co., Milwaukee, Wis.
- Ryan & Co., J. J., Chicago, Ill.
- Sanidome—The Haydenville Co., Haydenville, Mass.
- Savill Pat. Swan Neck—Thomas Savill & Son, Philadelphia, Pa.
- Saxon, Ronalds, Vigilant—J. D. Ronalds Co., Philadelphia.
- Schulte Brass Mfg. Co., Norwood, Cincinnati, O.
- Schwander Brass Mfg. Co., St. Louis, Mo.
- Sherman Mfg. Co., E. B., Battle Creek, Mich.
- Soderlund—Stebbins Mfg. Co., E., Springfield, Mass.
- Special, Victor—Fleck Bros. Co., Philadelphia, Pa.
- Standard Brass Casting Co., Oakland, Calif.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- Stebbins Mfg. Co., E., Springfield, Mass.
- Sterling Brass Co., The, Cleveland, O.
- Stone Mfg. Co., Mark, Grand Rapids, Mich.
- Street & Kent Mfg. Co., Chicago, Ill.
- Telas, Agilis—Crane Co., Chicago, Ill.
- Traymore—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Trenton Brass & Machine Co., The, Trenton, N. J.
- Union Brass & Metal Mfg. Co., St. Paul, Minn.
- United—United Brass Mfg. Co., Cleveland, O.

Utica—Utica Valve & Fixture Co., Utica, N. Y.  
 Welsh Cut-Off—Wm. Welsh, Cincinnati, O.  
 Wolff Mfg. Co., Chicago, Ill.  
 Woodhill Brass Co., The, Cleveland, O.

#### COCKS (AND BIBBS), BASIN, SINK, ETC., QUICK OPENING COMPRESSION.

Anglyn—Angster & Lynch, Newark, N. J.  
 Atkinson, The, Co., Rochester, N. Y.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Central Brass Mfg. Co., Cleveland, O.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
 Empire—Empire Brass Mfg. Co., Cleveland, Ohio.  
 Fries & Co., Buffalo, N. Y.  
 Gem Brass Mfg. Co., Cleveland, Ohio.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Globe Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., Haydenville, Mass.  
 Klos-With—Union Brass & Metal Co., St. Paul, Minn.  
 Kwik—J. A. Cochrane Brass Mfg. Co., Cleveland, O.  
 Kwik-Ac—Royal Brass Mfg. Co., Cleveland, O.  
 Loyal Brass Co., Cleveland, O.  
 Lukomski Brothers Co., Detroit, Mich.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Oberndorf Mfg. Co., Pittsburgh, Pa.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Penn Brass Mfg. Co., Cleveland, O.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Presto—Rickersberg Brass Co., Cleveland, O.  
 Prier—Prier Brass Mfg. Co., Kansas City, Mo.  
 Quatern—Chicago Faucet Co., The, Chicago, Ill.  
 Quickpression—Central Brass Mfg. Co., Cleveland.  
 Rapidac—Mueller Mfg. Co., H., Decatur, Ill.  
 Regle Work—Regle Brass Works, Greenville, Mich.  
 Rick, Quick—Rickersberg Brass Co., Cleveland, O.  
 Sandome—Haydenville Co., Haydenville, Mass.  
 Savill Pat. (Swan Neck)—Thos. Savill & Sons, Philadelphia.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Schwander Brass Mfg. Co., St. Louis, Mo.  
 Sterling Brass Mfg. Co., Cleveland, O.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 Woodhill Brass Co., The, Cleveland, O.  
 W-W Junior—Woodward-Wanger Co., Philadelphia, Pa.

#### COCKS (OR BIBBS), BASIN, SELF-CLOSING.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Acme, Oxford, Pacific, Prompto, Syphons—J. L. Mott Iron Works, Trenton, N. J.  
 Aqua—Crane Co., Chicago, Ill.  
 Banner—Banner Mfg. Co., New York, N. Y.  
 Barclay—David Craig, Boston, Mass.  
 Bashlin—The Bashlin Co., Warren, Pa.  
 Bay State Brass Co., Haydenville, Mass.  
 Boston Apex—F. N. Dubois & Co., New York, N. Y.  
 Boston—The Brookside Brass Foundry & Mfg. Co., Boston—Dearborn Brass Co., Cedar Rapids, Ia.  
 Boston, Doherty, Telegraph—Haydenville Co., Haydenville, Mass.  
 Boston—Federal-Huber Co., Chicago, Ill.  
 Boston—Fleck Bros. Co., Philadelphia, Pa.  
 Boston, Gialow—Wolff Mfg. Co., Chicago, Ill.  
 Boston—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Boston—United Brass Mfg. Co., Cleveland, O.  
 Boston or Zane—Street & Kent Mfg. Co., Chicago, Ill.  
 Brookside Brass Fdy. & Mfg. Co., Cleveland, O.  
 Broughton—E. Stebbins Mfg. Co., Springfield, Mass.  
 Burlington Brass Works, Burlington, Wis.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Chanticleer—Thos. Kelly & Bros., Chicago, Ill.  
 Clow Special—James B. Clow & Sons Co., Chicago, Ill.  
 Colonial—H. Mueller Mfg. Co., Decatur, Ill.  
 Continental—Federal-Huber Co., Chicago, Ill.  
 Cornell—Federal-Huber Co., Chicago, Ill.  
 Craig—David Craig, Boston, Mass.  
 Crown—Fleck Bros. Co., Philadelphia, Pa.  
 Crown—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 D. I. M. C. Special—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Doherty—Brookside Brass Fdry. & Mfg. Co., Cleveland, O.  
 Doherty—Federal-Huber Co., Chicago, Ill.  
 Doherty—Fleck Bros. Co., Philadelphia, Pa.  
 Doherty—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Doherty—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Doherty—The Meyer-Sniffen Co., New York, N. Y.  
 Doherty—The Peck Bros. & Co., New Haven, Conn.  
 Doherty—J. J. Ryan & Co., Chicago, Ill.  
 Doherty—Wolff Mfg. Co., Chicago, Ill.  
 Doherty-Ejector—F. N. Dubois & Co., New York, N. Y.  
 Dow—Hoffman & Billing Mfg. Co., Milwaukee, Wis.  
 Dubois—F. N. Dubois & Co., Inc., The, New York, N. Y.

Dupont—Wolff Mfg. Co., Chicago, Ill.  
 Easy Grip—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Economy—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Elgin Brass Co., Cleveland, O.  
 Eljer Co., Cameron, W. Va.  
 Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Empress—Crane Co., Chicago, Ill.  
 Ex-ra-Pattern—Wolff Mfg. Co., Chicago, Ill.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Field—Fleck Bros. Co., Philadelphia, Pa.  
 Fountain Faucet Co., Duluth, Minn.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Gasco—Federal-Huber Co., Chicago, Ill.  
 Gialow—Wolff Mfg. Co., Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland.  
 Globe Brass Mfg. Co., Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville—The Haydenville Co., Haydenville, Mass.  
 Hudson—Federal-Huber Co., Chicago, Ill.  
 Johnson—Federal-Huber Co., Chicago, Ill.  
 Landers, Frary & Clark, New Britain, Conn.  
 Lenox—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Leviathan—Milwaukee Brass Mfg. Co., Milwaukee.  
 Leviathan—Fleck Bros. Co., Philadelphia, Pa.  
 Lewis—The Monarch Specialty Mfg. Co., Columbus, O.  
 Maltby, Geo. W., & Son, Buffalo, N. Y.  
 Mark, Milwaukee—Hoffman & Billing Mfg. Co., Milwaukee, Wis.  
 McCambridge Co., Philadelphia, Pa.  
 Moores—The Peck Bros. & Co., New Haven, Conn.  
 Mueller Colonial—H. Mueller Mfg. Co., Decatur, Ill.  
 National—National Brass Mfg. Co., Rochester, N. Y.  
 Non-tie-open—Federal-Huber Co., Chicago, Ill.  
 Northern Tool Co., Inc., Utica, N. Y.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Payne Pattern—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 P. B.—The Peck Bros. & Co., New Haven, Conn.  
 Peck Bros. & Co., The, New Haven, Conn. Trade names—Ball Bearing Yale, Moore's, Chester, Lincoln, Messenger.  
 Peerless—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Peerless—Wolverine Brass Works, Grand Rapids, Mich.  
 Perfecto—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Perry—Federal-Huber Co., Chicago, Ill.  
 Pierce—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Porter—Wolff Mfg. Co., Chicago, Ill.  
 Presto—Crane Co., Chicago, Ill.  
 Presto—Rickersberg Brass Co., Cleveland, O.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Quaker—Haines, Jones & Cadbury Co., Philadelphia.  
 Quatern—Chicago Faucet Co., The, Chicago, Ill.  
 Rapidac—H. Mueller Mfg. Co., Decatur, Ill.  
 Rex, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Royal Brass Mfg. Co., The, Cleveland, O.  
 Ryan—Thomas W. Ryan, Concord, Jct., Mass.  
 Sanitap—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Santos—Jenkins Mfg. Co., New York, N. Y.  
 Schild—The Schild Specialty Co., Cleveland, O.  
 Schwander Brass Mfg. Co., St. Louis, Mo.  
 Singer—Federal-Huber Co., Chicago, Ill.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Star Ball Bearing—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Telegraph—Federal-Huber Co., Chicago, Ill.  
 Telegraph—Fleck Bros. Co., Philadelphia, Pa.  
 Telegraph—Milwaukee Brass Mfg. Co., Milwaukee.  
 Telegraph—The Peck Bros. & Co., New Haven, Conn.  
 Telegraph—Powhatan Brass & Iron Works, Charles Town, W. Va.  
 Telegraph—Wolff Mfg. Co., Chicago, Ill.  
 Triumph—Crane Co., Chicago, Ill.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Upreso—Jenkins Mfg. Co., New York, N. Y.  
 Upton—Haines, Jones & Cadbury Co., Philadelphia.  
 Viking—Hoffman & Billing Mfg. Co., Milwaukee, Wis.  
 Watrous—Federal-Huber Co., Chicago, Ill.  
 ♦ Watrous Push Button—Imperial Brass Mfg. Co., Chicago.  
 Zenith—Federal-Huber Co., Chicago, Ill.

#### COCKS, BASIN, SWING.

Craig—David Craig, Boston, Mass.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.

#### COCKS, BASIN AND WASTE COMBINED.

Boylston—Wm. Bunting, Jr., Boston, Mass.  
 Goetz—Goetz Brass Co., Chicago, Ill.  
 Imperator—Chicago Faucet Co., Chicago, Ill.



# Waterbury Manufacturing Company

## Waterbury, Connecticut

### Makers of Brass Goods

Specialties for Plumbing Supply Jobbers

#### COCKS, BATH, COMPRESSION.

American Brass Mfg. Co., Cleveland, Ohio.  
 American—The Murdock Mfg. Supply Co., Cincinnati  
**Atkinson, The Co.**, Rochester, N. Y.  
 Bay State Brass Co., Haydenville, Mass.  
 Belmont—F. W. Webb Mfg. Co., Boston, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Century—The Century Brass Mfg. Co., Cattaraugus, N. Y.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich. (Turban and Desanco patterns.)  
 Cochran, J. A., Brass Mfg. Co., The, Cleveland, O.  
 Colonial—Detroit Sanitary Supply Co., Detroit, Mich.  
 Crane Co., Chicago, Ill.  
 Dick Bros., Inc., Reading, Pa.  
 Du Bois, F. N. & Co., Inc., The, New York, N. Y.  
 Elgin Brass Co., Cleveland, Ohio.  
 Essex—F. W. Webb Mfg. Co., Boston, Mass.  
**Exeter Brass Works**, Exeter, N. H.  
 Extra Pattern—Wolff Mfg. Co., Chicago, Ill.  
 Farnam Brass Works Co., The, Cleveland, O.  
**Fries & Co.**, Buffalo, N. Y.  
 Gem Brass Mfg. Co., The, Cleveland, Ohio.  
**Gibson Bros. Mfg. Co.**, North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Globe Brass Mfg. Co., Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Hudson—F. W. Webb Mfg. Co., Boston, Mass.  
 Humphreys Mfg. Co., Mansfield, O.  
 Kruecke Bros. Mfg. Co., Milwaukee, Wis.  
 Loyal Brass Co., Cleveland, O.  
 Maiden—Melrose—F. W. Webb Mfg. Co., Boston, Mass.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McShane Bell Foundry Co., Baltimore, Md.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
**Monarch—Monarch Brass Co.**, The, Cleveland, O.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Northern Brass Mfg. Co., Waukegan, Ill.  
 Oberndorf Mfg. Co., The, Pittsburg, Pa.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Quatern—Chicago Faucet Co., The, Chicago, Ill.  
 Quickpression—Central Brass Mfg. Co., Cleveland, O.  
 Rapidac—H. Mueller Mfg. Co., Decatur, Mich.  
 Regie Brass Co., Greenville, Mich.  
 Richter—Richter & Co., Cincinnati, Ohio.  
 Rick, Quick—Rickersberg Brass Co., Cleveland, Ohio.  
 Rival, Vigilant, Ronalds, Rex, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
**Rochester—The Atkinson Co.**, Rochester, N. Y.  
 Royal Brass Mfg. Co., Cleveland, O.  
 Rundie Mfg. Co., Milwaukee, Wis.  
 Sanidome—Haydenville Co., The, Haydenville, Mass.  
 Sanitas Mfg. Co., Boston, Mass.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Standard Brass Casting Co., Oakland, Calif.  
 Sterling Brass Co., The, Cleveland, O.  
 Stewart—Apex Mfg. Co., Cleveland, O.  
 Stone, Mark, Mfg. Co., Grand Rapids, Mich.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Vernon—F. W. Webb Mfg. Co., Boston, Mass.  
**Weiskittel, A., & Son Co.**, Baltimore, Md.  
 Western Brass Mfg. Co., Milwaukee, Wis.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### COCKS, BATH, FULLER.

Burlington—Burlington Brass Works, Burlington, Wis.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Clipper—McCambridge Co., Philadelphia, Pa.  
 Corona—Wolff Mfg. Co., Chicago, Ill.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Dick Bros., Inc., Reading, Pa.  
 Dougherty—Dearborn Brass Co., Cedar Rapids, Ia.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Federal—Huber Co., Chicago, Ill.

**Fries & Co.**, Buffalo, N. Y.  
**Gibson Bros. Mfg. Co.**, North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville—The Haydenville Co., Haydenville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Jenkins Mfg. Co., New York, N. Y.  
 Loyal Brass Co., Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 National—Haines, Jones & Cadbury Co., Philadelphia  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Northern Brass Mfg. Co., Waukegan, Ill.  
 Oberndorf Mfg. Co., Pittsburg, Pa.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Rapidac—H. Mueller Mfg. Co., Decatur, Ill.  
 Rex—Jenkins Mfg. Co., New York, N. Y.  
 Richter Co., The, Cincinnati, O.  
 Rundie Mfg. Co., Milwaukee, Wis.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Soderlund—E. Stebbins Mfg. Co., Springfield, Mass.  
 Sterling Brass Co., The, Cleveland, O.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Syracuse Faucet & Valve Co., Syracuse, N. Y.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.  
**Weiskittel & Son, A.**, Baltimore, Md.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward & Wanger, Philadelphia, Pa.

#### COCKS, BATH, WHITE ENAMEL.

Divekey—Divekey Bros. Mfg. Co., Aurora, Ill.

#### COCKS, BLOW-OFF.

(See also "Valves, Blow-off.")

American Safety Lamp & Mine Supply Co., Scranton.  
 Bordo—Bordo, L. J., Co., Philadelphia, Pa.  
 Boston Steam Specialty Co., Boston, Mass.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Cyclone—The Wm. Powell Co., Cincinnati.  
 Everlasting—Scully Steel & Iron Co., Chicago, Ill.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Haydenville Co., The, Haydenville, Mass.  
 Homestead—Homestead Valve Mfg. Co., Pittsburg, Pa.  
 Judson Governor Co., The, Rochester, N. Y.  
 Lukomski Brothers Co., Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Powell Co., The Wm., Cincinnati, O.  
 Rothschild—Simmons Co., John, New York, N. Y.  
 Shaw—The Roelck Co., Zanesville, Ohio.  
 Walworth Mfg. Co., Boston, Mass.  
 W.-McD.—Watson & McDaniel Co., Philadelphia, Pa.

#### COCKS, BOILER, DRAIN.

(See "Cocks, Range Boiler.")

#### COCKS, BOTTLING.

Haydenville Co., The, Haydenville, Mass.  
 Landers, Frary & Clark, New Britain, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Wilton—Wilton Mfg. Co., Wrightsville, Pa.

#### COCKS, BRANCH.

Kelly & Jones Co., The, Greensburg, Pa.

#### COCKS, BRINE.

C. C.—Crane Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
**Gibson Bros. Mfg. Co.**, North Chicago, Ill.  
 Hays Mfg. Co., Erie, Pa.  
 McKee & Roberts Co., Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.

#### COCKS, BROWNE.

Best—Best Mfg. Co., Pittsburg, Pa.  
 Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
**Exeter Brass Works**, Exeter, N. H.  
 Hays Mfg. Co., Erie, Pa.  
 Homestead Valve Mfg. Co., Homestead, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Walworth Mfg. Co., Boston, Mass.

#### COCKS, CISTERN.

Mueller Mfg. Co., H., Decatur, Ill.  
 Wolff Mfg. Co., L., Chicago, Ill.

#### COCKS, CORPORATION AND WATERWORKS.

Acorn Pattern—Columbus Brass Co., Columbus, O.  
 Alliance Brass Foundry Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Buckeye Iron & Brass Works, Dayton, O.  
 C. C.—Crane Co., Chicago, Ill.  
 Chapman Valve Mfg. Co., Indian Orchard, Mass.

- Cleveland Brass Mfg. Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Farnam—Farnam Brass Works Co., The, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Garratt & Co., W. T., San Francisco, Cal.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hamlin & Emery Brass Co., The, Boston, Mass.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Healey, Peter, Brass Foundry Co., Evansville, Ind.  
 K. M.—Kinsey & Mahler Co., Peoria, Ill.  
 Kitson Co., The, Philadelphia, Pa.  
 Lunkenheimer Co., Cincinnati, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nichol & Co., Thos. J., Cincinnati, O.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Perkins, H. K., Co., Taunton, Mass.  
 Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Pratt & Cady Co., Hartford, Conn.  
 Richter—Richter & Co., Cincinnati, O.  
 Rockford Brass Works, Rockford, Ill.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Smith, A. P., Mfg. Co., East Orange, N. J.  
 Stebbins, E., Mfg. Co., Springfield, Mass.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Water Meter Co., Worcester, Mass.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Walworth Mfg. Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill.

#### COCKS, CORPORATION, LEAD FLANGE.

- Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Rick—Rickersberg Brass Co., Cleveland, O.

#### COCKS, CREAM SEPARATOR.

- Clark Cadle Harmon Corp., Rochester, N. Y.  
 McEae & Roberts Co., The, Detroit, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Peninsular Brass Works, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Standard Brass Works, Detroit, Mich.

#### COCKS, CURB.

- Alliance Brass Foundry Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Aurora—Farnam Brass Works, Cleveland, O.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Eastwood—Eastwood Wire Mfg. Co., Belleville, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Farnam—Farnam Brass Works Co., The, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Kansas City—Farnam Brass Works, Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Perkins, H. K. Co., Taunton, Mass.  
 Pratt & Cady Co., Hartford, Conn.  
 Rockford Brass Works, Rockford, Ill.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Smith, A. P., Mfg. Co., East Orange, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Water Meter Co., Worcester, Mass.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Walworth Mfg. Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill.

#### COCKS, CURB, INVERTED KEY.

- Alliance Brass Foundry Co., Detroit, Mich.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 McDonald Mfg. Co., Dubuque, Ia.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.

#### COCKS, CYLINDER.

- American—American Lubricator Co., Detroit, Mich.  
 American Safety Lamp & Mine Supply Co., Scranton.  
 The Belknap Mfg. Co., Bridgeport, Conn.  
 Buckeye Iron & Brass Works, Dayton, O.  
 C. C.—Crane Co., Chicago, Ill.  
 Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Detroit Brass & Malleable Works, Detroit, Mich.

- Edna Brass Mfg. Co., The, Cincinnati, O. (Locomotive.)  
 Fries & Co., Buffalo, N. Y.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Hancock Inspirator Co., New York.  
 Haydenville Co., The, Haydenville, Mass.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Kitson Co., Philadelphia, Pa.  
 Lonergan Co., J. E., Philadelphia, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Nathan Mfg. Co., New York, N. Y.  
 Newark Brass Works, Newark, N. J.  
 Peninsular Brass Works, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Standard Brass Works, Detroit, Mich.  
 Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 Swift—The Swift Lubricator Co., Elmira, N. Y.  
 Walworth Mfg. Co., Boston, Mass.  
 Watertown Automatic—Watertown Specialty Co., Watertown, N. Y.

#### COCKS, DIAL.

Essex Brass Corp., Detroit, Mich.

#### COCKS, DRAW-OFF, BOILER.

- D. C.—D. C. Mfg. Co., Canton, O.  
 Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Dole—The Dole Valve Co., Chicago, Ill.  
 Exeter Brass Works, Exeter, N. H.  
 Flannery, P. J., Co., New Britain, Conn.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Kitson Co., Philadelphia, Pa.  
 Lukomski Brothers Co., Detroit, Mich.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Oberndorf Mfg. Co., Pittsburgh, Pa.  
 Peninsular Brass Works, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Standard—Acme Brass Works, Detroit, Mich.  
 Sterling & Skinner Mfg. Co., Detroit, Mich.  
 Walworth Mfg. Co., Boston, Mass.

#### COCKS, DRINKING FOUNTAIN.

(See also "Fountains, Drinking.")

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Chi-Fau-Co.—Chicago Faucet Co., Chicago, Ill.  
 Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Filglas—Mueller Mfg. Co., H., Decatur, Ill.  
 Fountain Faucet Co., Duluth, Minn.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 Lukomski Brothers Co., Detroit, Mich.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Perry—Federal-Huber Co., Chicago, Ill.  
 Puro—Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
 J. J. Ryan & Co., Chicago, Ill.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Standard—Prior Brass Mfg. Co., Kansas City, Mo.  
 20th Century—Twentieth Century Brass Works, Chicago, Ill.  
 Watrous—Imperial Brass Mfg. Co., Chicago, Ill.

#### COCKS, DRIP.

- Exeter Brass Works, Exeter, N. H.  
 Haydenville Co., The, Haydenville, Mass.  
 Industrial Instrument Co., The, Foxboro, Mass.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 McEae & Roberts Co., Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Walworth Mfg. Co., Boston, Mass.

#### COCKS, FILTER PRESS.

- Gibson Bros. Mfg. Co., North Chicago, Ill.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Smith, A. P. Mfg. Co., East Orange, N. J.  
 Standard Brass Works, Detroit, Mich.

#### COCKS (OR FAUCETS), BARREL.

Exeter Brass Works, Exeter, N. H.  
 Haydenville Co., The, Haydenville, Mass.  
 Morrison Bros., Dubuque, Iowa.

#### COCKS (AND FIXTURES), FACTORY WASH TROUGH.

- Briscoe, Stearns, Velle—Glauber Brass Mfg. Co., Cleveland, O.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Tempo—Geetz Brass Co., Chicago, Ill.



## COCKS (AND BIBBS), FULLER, BASIN, SINK, ETC.

American Brass Mfg. Co., The, Cleveland, O.  
 Apex—F. N. Dubois & Co., New York, N. Y.  
 Atlas Brass Mfg. Co., Cleveland, O.  
 Belfield Co., H., Philadelphia, Pa.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
 Crane Company, Chicago, Ill.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Du Bois, F. N. & Co., Inc., The, New York.  
 Eclipse—Crane Co., Chicago, Ill.  
 Ejector—F. N. Dubois Co., New York, N. Y.  
 Elind—Street & Kent Mfg. Co., Chicago, Ill.  
 Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Extra Pattern—Wolff Mfg. Co., Chicago, Ill.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Federal—Huber Co., Chicago, Ill.  
 Fountain Faucet Co., Duluth, Minn.  
 Gaco—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Glauber Brass Mfg. Co., The, Cleveland, O.  
 Globe Brass Mfg. Co., The, Cleveland, O.  
 Gopher—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Haydenville—The Haydenville Co., Haydenville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Jenkins Mfg. Co., New York, N. Y.  
 Juneau—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Justrite—Empress—Crane Co., Chicago, Ill.  
 Kruecke Bros. Mfg. Co., Milwaukee, Wis.  
 Landers, Frary & Clark, New Britain, Conn.  
 Loyal Brass Co., Cleveland, O.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Milwaukee Flush Valve Co., Milwaukee, Wis.  
 Monarch Brass Co., The, Cleveland, O.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Northern Brass Mfg. Co., Waukegan, Ill. (See advertisement pages 14, 15.)  
 Oberndorf Mfg. Co., The, Pittsburg, Pa.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
 Perfection—Crampton-Farley Brass Co., Kansas City, Mo.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Richter & Co., Cincinnati, Ohio.  
 Roman—Fleck Bros. Co., Philadelphia, Pa.  
 Rundie Mfg. Co., Milwaukee, Wis.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Schwander Brass Mfg. Co., St. Louis, Mo.  
 S. & K. Improved—Street & Kent Mfg. Co., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Victor—Fleck Bros. Co., Philadelphia, Pa.  
 Weiskittel & Son, A., Baltimore, Md.  
 Wolff Mfg. Co., Chicago, Ill.  
 Woodmer—Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 York—The Meyer-Sniffen Co., New York, N. Y.

## COCKS, GAGE.

Aetna, Olympus—Nason Mfg. Co., New York, N. Y.  
 Alexander Patent—Marion Machine, Fdy. & Sup. Co., Marion, Ind.  
 ♦ American—American Injector Co., Detroit, Mich.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 American Lubricator Co., Detroit, Mich.  
 Ashcroft—Ashcroft Mfg. Co., New York, N. Y.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Belfield Co., H., Philadelphia, Pa.  
 Bingham—The Chaplin Fulton Mfg. Co., Pittsburg, Pa.  
 Bonar—James Bonar & Co., Pittsburg, Pa.  
 Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Burrows—Burrows Mfg. Co., York, Pa.  
 Cadman—A. W. Cadman Mfg. Co. (ball valve), Pittsburgh, Pa.  
 Chicago—The Ohio Injector Co., Wadsworth, O.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Debco—F. W. Webb Mfg. Co., Boston, Mass.  
 Defender Automatic Regulator Co., St. Louis, Mo.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 ♦ Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.  
 Diamond S—John Simmons Co., New York, N. Y.  
 Drinose—Crane Valve Co., Bridgeport, Conn.  
 ♦ Duplex—McEae & Roberts Co., Detroit, Mich.  
 ♦ Edna Brass Mfg. Co., The, Cincinnati, O. (Locomotive).  
 ♦ Excelsior—The Lunkenheimer Co., Cincinnati, O.  
 ♦ Felthausen—Sherwood Mfg. Co., Buffalo, N. Y.

THE ORIGINAL 35 YEARS AGO  STANDARD EVER SINCE

Safety Water Columns Gauge Cocks Steam Traps Water Gauges  
 Seamless Copper Floats

# Reliance

RELIANCE GAUGE COLUMN CO. 5910 CARNEGIE AVE. CLEVELAND OHIO.

Fries & Co., Buffalo, N. Y.  
 Gaco—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Great Northern—Northern Tool Co., Inc., Utica, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Healey, Peter, Brass Foundry Co., Evansville, Ind.  
 Hills—McCanna Co., Chicago, Ill.  
 Hoffman—Haines, Jones & Cadbury Co., Philadelphia.  
 Horth—G. W. Fleming Co., Bradford, Pa.  
 Hoyt—Star Brass Mfg. Co., Boston, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ideal—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Imico—Illinois Malleable Iron Co., Chicago, Ill.  
 Improved—Union Brass & Metal Mfg. Co., St. Paul, Minn.

♦ Jenkins—Jenkins Bros., New York, N. Y.  
 Jenkins—Jenkins Mfg. Co., New York, N. Y.  
 Jerguson Navy—Jerguson Gage & Valve Co., Somerville, Mass.  
 ♦ Kelly & Jones Co., Greensburg, Pa.  
 Knapp Mfg. & Supply Co., New York, N. Y.  
 Konold, M. J., Pittsburg, Pa.  
 Lippold Valve Co., The, Erie, Pa.  
 ♦ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Lunkenheimer Co., Cincinnati, O.  
 L. B.—The L. B. Brass Co., Peabody, Mass.  
 Macungie—Macungie Brass & Mfg. Co., Macungie, Pa.  
 Madden's Patent—James B. Clow & Sons, Chicago.  
 Maine & M. V.—Maine Valve Co., Skowhegan, Me.  
 McAlpine—A. McAlpine Mfg. Co., Swissdale, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 McShane Bell Foundry Co., Baltimore, Md.  
 ♦ Michigan Lubricator Co., Detroit, Mich.  
 Monitor—Thos. F. Payne, Pittsburg, Pa.  
 M. V. B.—Morency-Van Buren Co., Sturgis, Mich.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Never-Leak—Nathan Mfg. Co., New York, N. Y.  
 P. B. H.—Paul B. Huyette Co., Inc., The, Philadelphia, Pa.  
 Perfection—O'Malley-Beare Valve Co., Chicago, Ill.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Porteous—The Brass Mfg. Co., Cincinnati, O.  
 ♦ Powell Co., Wm., Cincinnati, O.  
 Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Reliable—The Sanitary Mfg. Co., Hamilton, O.  
 ♦ Reliance—Reliance Gauge Column Co., Cleveland, O.  
 Renewo—Lunkenheimer Co., Cincinnati, O.  
 Rex—The Sanitary Mfg. Co., Hamilton, O.  
 Rich Mfg. Co., Boston, Mass.  
 ♦ Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Robertson Vertical Valve—John F. Robertson Co., Pittsburgh, Pa.  
 Rumsey Mfg. Co., L. M., St. Louis, Mo.  
 S. C. Regulator Mfg. Co., The, Fostoria, O.  
 Scully—W. J. Scully Ventilator & Mfg. Co., Detroit.  
 Simmons Co., John, New York, N. Y.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 ♦ Sterling & Skinner Mfg. Co., Detroit, Mich.  
 Sterling—Sterling Specialty Co., Pittsburg, Pa.  
 Straight Line—Illinois Malleable Iron Co., Chicago.  
 Stulp—Fred J. Stulp, Muskegon, Mich. (Automatic regrinding.)  
 Swartwout (self-grinding)—The Ohio Body & Blower Co., Cleveland, O.  
 Triumph—The Ohio Pump & Brass Co., Columbus, O.  
 Union—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Metal Works, Chelsea, Mass.  
 United—United Brass Mfg. Co., Cleveland, O.  
 ♦ United States Gauge Co., New York, N. Y.  
 Van Arnam Mfg. Co., Fort Wayne, Ind.  
 Vesuvius—Nason Mfg. Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Williams Co., The, Pittsburg, Pa.  
 Wright-Austin Co., Detroit, Mich.  
 Wright Specialty Mfg. Co., The, Youngswood, Pa.  
 Wyssler, J. P., Pittsburg, Pa.

## COCKS, GAGE, COMPRESSION.

♦ American—American Injector Co., Detroit, Mich.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 C. C.—Crane Co., Chicago, Ill.

- Crosby Steam Gage & Valve Co., Boston, Mass.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Garrett & Co., W. T., San Francisco, Cal.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McNab & Harlin Mfg. Co., New York.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 Michigan—Michigan Lubricator, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 Swift Lubricator Co., The, Elmira, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, GAGE, LOCOMOTIVE.**

- Gaco—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Konold, M. J., Pittsburgh, Pa.  
 Lonergan Co., J. E., Philadelphia, Pa.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**COCKS, GAGE, "REGISTER."**

- Detroit Brass & Malleable Works, Detroit, Mich.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 ♦ Michigan Lubricator Co., Detroit, Mich.  
 ♦ Roberts Brass Mfg. Co., The, Detroit, Mich.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.

**COCKS, GAGE, SELF-CLOSING.**

- Diamond—Cleveland Flue Cleaner Mfg. Co., Cleveland, O.

**COCKS, GAGE, SIPHON.**

- United States Gauge Co., New York, N. Y.

**COCKS, GAS.**

- Alliance Brass Foundry Co., Detroit, Mich.  
 American Brass Mfg. Co., The, Cleveland, O.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Atlas—Atlas Brass Works, Inc., San Francisco, Cal.  
 Buckeye Iron & Brass Works, Dayton, O.  
 C. C.—Crane Co., Chicago, Ill.  
 Clark—Jewel—Geo. M. Clark & Co., Chicago, Ill.  
 Cleveland Faucet Co., The, Cleveland, O.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Farles Mfg. Co., Decatur, Ill.  
 Farnan Brass Works Co., The, Cleveland, O.  
 Flannery, P. J., Co., New Britain, Conn.  
 Frank Bros., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Healey, Peter, Brass Foundry Co., Evansville, Ind.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kirkup, Robert, & Co., Cincinnati, O.  
 Kitson Co., Philadelphia, Pa.  
 Lippold Valve Co., The, Erie, Pa.  
 Loyal Brass Co., Cleveland, O.  
 Lukomski Brothers Co., Detroit, Mich.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 Mueller Mfg. Co., H., Decatur, Ill. (also iron body).  
 National Brass Mfg. Co., Rochester, N. Y.  
 Nichol & Co., Thos. J., Cincinnati, O.  
 Nulock—Glauber Brass Mfg. Co., Cleveland, O.  
 Odin—Odin Stove Mfg. Co., Erie, Pa.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Peninsular Brass Works, Detroit, Mich.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Richter—Richter & Co., The, Cincinnati, O.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Rockford Brass Works, Rockford, Ill.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Utica Valve and Fixture Co., Utica, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, GAS ENGINE THROTTLE.**

- Carruthers-Fithian Clutch Co., Grove City, Pa.  
 Essex Brass Corp., Detroit, Mich.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.

**COCKS (OR VALVES), GAS, HIGH PRESSURE**

- Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Healy, Peter, Brass Foundry Co., Evansville, Ind.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kitson Co., Philadelphia, Pa.  
 Mueller Mfg. Co., H., Decatur, Ill.

- Smith—The Smith Gas Power Co., Lexington, Ohio.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, GAS ROSE.**

- ♦ McRae & Roberts Co., The, Detroit, Mich.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, GAS LOG.**

- Haydenville Co., The, Haydenville, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 Mueller Mfg. Co., Decatur, Ill.  
 Peerless Brass Mfg. Co., Cleveland, O.

**COCKS, GAS METER.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Belfield Co., H., Philadelphia, Pa.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 C. C.—Crane Co., Chicago, Ill.  
 Cleveland Brass Mfg. Co., Cleveland, O.  
 Crane Valve Co., Bridgeport, Conn.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Garratt & Co., W. T., San Francisco, Cal.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hamlin & Emery Brass Co., The, Boston, Mass.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Healey, Peter, Brass Foundry Co., Evansville, Ind.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kitson Co., Philadelphia, Pa.  
 K. M.—Kinsey & Mahler Co., Peoria, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nichol, Thos. J., & Co., Cincinnati, O.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Richter & Co., The, Cincinnati, O.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS (AND VALVES), GAS, NATURAL**

- Advance & Franklin—Advance Mfg. Co., Erie, Pa.  
 Best—Best Mfg. Co., Pittsburgh, Pa.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Columbus Brass Co., Columbus, O.  
 Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.  
 Farnan—Farnan Brass Works Co., The, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Healy, Peter, Brass Foundry Co., Evansville, Ind.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Kitson Co., Philadelphia, Pa.  
 ♦ Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 ♦ McRae & Roberts Co., Detroit, Mich.  
 Mueller Mfg. Co., Decatur, Ill.  
 ♦ Ohio—Ohio Brass Co., The, Mansfield, O.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Simplex—Halsey Mfg. Co., Lynn, Mass.  
 United Brass Mfg. Co., Cleveland, O.

**COCKS, GAS SERVICE.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
 ♦ American Lubricator Co., Detroit, Mich.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Capital Brass Works, Detroit, Mich.  
 C. C.—Crane Co., Chicago, Ill.  
 Cleveland Brass Mfg. Co., Cleveland, O.  
 Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.  
 Edna Brass Mfg. Co., The, Cincinnati, O.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Exeter Brass Works, Exeter, N. H.  
 Farnan Brass Works Co., The, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hamlin & Emery Brass Co., The, Boston, Mass.  
 Hasty—American Safety Valve Co., Chicago.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kitson Co., Philadelphia, Pa.  
 Klee—United Brass Mfg. Co., Cleveland, O.  
 Lord—The C. H. Yonts Co., Meadville, Pa.

- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ **McRae & Roberts Co.**, Detroit, Mich.
- Mueller Mfg. Co., H., Decatur, Ill.
- Peck Bros. & Co., The, New Haven, Conn.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ **Powell Co., The Wm.**, Cincinnati, O.
- Powhatan Brass & Iron Works, Ranson, W. Va.
- Richter—Richter & Co., Cincinnati, O.
- ◆ **Sherman Mfg. Co., E. B.**, Battle Creek, Mich.
- Stacey—The Stacey Mfg. Co., Cincinnati, O.
- Superior—The Superior Mfg. Co., Pittsburgh, Pa.
- ◆ **United—United Brass Mfg. Co.**, Cleveland, O.
- Vulcan—Wm. M. Crane Co., New York, N. Y.
- ◆ **Walworth Mfg. Co.**, Boston, Mass.

**COCKS, GAS STOVE.**

- A-B Stove Co., Dept. S, Battle Creek, Mich.
- Acme Brass Works, Detroit, Mich.
- Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.
- Franklin—The Columbus Brass Co., Columbus, O.
- Franklin—United Brass Mfg. Co., Cleveland, O.
- ◆ **Gibson Bros. Mfg. Co.**, North Chicago, Ill.
- Haydenville Co., The, Haydenville, Mass.
- ◆ **Hays Mfg. Co.**, Erie, Pa.
- Kelly & Jones Co., The, Greensburg, Pa.
- Kitson Co., Philadelphia, Pa.
- ◆ **McRae & Roberts Co., The**, Detroit, Mich.
- Mueller Mfg. Co., H., Decatur, Ill.
- O'Reilly—M. J. O'Reilly, Buffalo, N. Y.
- Peninsular Brass Works, Detroit, Mich.
- Perkes, Chas., Co., Philadelphia, Pa.
- Roberts Brass Mfg. Co., The, Detroit, Mich.
- Standard Brass Works, Detroit, Mich.
- ◆ **Sterling & Skinner Mfg. Co.**, Detroit, Mich.
- United—United Brass Mfg. Co., Cleveland, O.

**COCKS, GASOLINE.**

- Commonwealth Brass Corp., Detroit, Mich.
- ◆ **Detroit Lubricator Co.**, Detroit, Mich.
- Hancock Mfg. Co., Charlotte, Mich.
- ◆ **Homestead Valve Mfg. Co.**, Homestead, Pa.
- ◆ **Imperial Brass Mfg. Co.**, Chicago, Ill.
- ◆ **Lunkenheimer Co.**, Cincinnati, O.
- Kant Leak—Michigan Lubricator Co., Detroit, Mich.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ **McRae & Roberts Co.**, Detroit, Mich.
- National—National Brass Mfg. Co., Rochester, N. Y.
- Peninsular Brass Works, Detroit, Mich.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ **Powell, Wm., Co.**, The, Cincinnati, O.
- Quadlock—Lunkenheimer Co., Cincinnati, O.
- ◆ **Roberts Brass Mfg. Co.**, Detroit, Mich.
- Standard Brass Works, Detroit, Mich.
- ◆ **Sterling & Skinner Mfg. Co.**, Detroit, Mich.
- Union Brass & Metal Mfg. Co., St. Paul, Minn.
- ◆ **Walworth Mfg. Co.**, Boston, Mass.

**COCKS, GLAND PACKED, IRON AND BRONZE.**

Eastwood Wire Mfg. Co., Belleville, N. J.

**COCKS, "E" PATTERN.**

- Exeter Brass Works, Exeter, N. H.
- ◆ **Hays Mfg. Co.**, Erie, Pa.
- Kitson Co., Philadelphia, Pa.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- Mueller Mfg. Co., H., Decatur, Ill.
- Paragon—Paragon Brass Mfg. Co., Cleveland, O.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- ◆ **Walworth Mfg. Co.**, Boston, Mass.

**COCKS, HOPPER.**

- Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.
- Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.
- Edwardsville Brass Co., Edwardsville, Ill.
- ◆ **Exeter Brass Works**, Exeter, N. H.
- Extra Pattern—Wolff Mfg. Co., Chicago, Ill.
- Fries & Co., Buffalo, N. Y.
- Hoffman & Billings Mfg. Co., Milwaukee, Wis.
- Jenkins Mfg. Co., New York, N. Y.
- Johnson—Federal-Huber Co., Chicago, Ill.
- Johnson—Wolff Mfg. Co., Chicago, Ill.
- Kelly Anti-Freezing—Thos. Kelly & Bros., Chicago, Ill.
- Kitson Co., Philadelphia, Pa.
- Kruecke Bros. Mfg. Co., Milwaukee, Wis.
- Maltby, Geo. W., & Sons Co., Buffalo, N. Y.
- Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- Mueller Mfg. Co., H., Decatur, Ill.
- Nelson Mfg. Co., N. O., St. Louis, Mo.
- Payne's—Pittsburg Brass Mfg. Co., Pittsburg, Pa.
- Peck Bros. & Co., The, New Haven, Conn.
- Perkes, Chas., Co., Philadelphia, Pa.
- Powhatan Brass & Iron Works, Ranson, W. Va.
- Prier Brass Mfg. Co., Kansas City, Mo.
- Standard—Prier Brass Mfg. Co., Kansas City, Mo.
- Street & Kent Mfg. Co., Chicago, Ill.
- United—United Brass Mfg. Co., Cleveland, O.

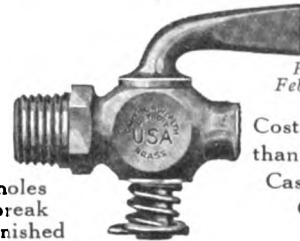
**COCKS, HOPPER, SELF-CLOSING.**

Boston—Wolff Mfg. Co., Chicago, Ill.

# New Design DRAIN COCKS

## and GASOLINE SHUT-OFF COCKS

Made Entirely from Brass Rod



Patented  
Feb. 8, 1921.

Cost no more  
than ordinary  
Cast Rough  
Cocks

No blow-holes  
Will not break  
Always finished

*Samples gladly sent on request.*

Manufacturers of complete line of

Ball Solderless Fittings  
S. A. E. Flared Tube Fittings  
Brazing or Soldering Fittings  
Standard Pipe Fittings  
Special Pipe & Tube Fittings

Made in brass for Gasoline, Water,  
Air and Oil Lines

### COMMONWEALTH BRASS CORP'N

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Commonwealth Ave.

DETROIT  
MICH.

- Boston—Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- Boston—The Brookside Brass Foundry & Mfg. Co., Cleveland, O.
- Em Ess—The Meyer-Sniffen Co., New York, N. Y.
- Milwaukee—Hoffman & Billings Mfg. Co., Milwaukee.
- Moore's—The Peck Bros. & Co., New Haven, Conn.
- Nelson, N. O., Mfg. Co., St. Louis, Mo.
- Peerless—Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- Perkes, Chas., Co., Philadelphia, Pa.
- Telegraph—Milwaukee Brass Mfg. Co., Milwaukee.
- United—United Brass Mfg. Co., Cleveland, O.

**COCKS, ROSE.**

- Alliance Brass Foundry Co., Detroit, Mich.
- Chi-Fau Co Garage Cock—Chicago Faucet Co., Chicago, Ill.
- Dallett—Thos. H. Dallet Co., Philadelphia.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Flannery, P. J., Co., New Britain, Conn.
- Haydenville Co., The, Haydenville, Mass.
- Landers, Frary & Clark, New Britain, Conn.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ **McRae & Roberts Co., The**, Detroit, Mich.
- Mueller Mfg. Co., H., Decatur, Ill. (Automatic.)
- Peninsular Brass Works, Detroit, Mich.
- Penn—East Penn Foundry Co., Macungie, Pa.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ **Roberts Brass Mfg. Co.**, The, Detroit, Mich.
- Schulte Brass Mfg. Co., Norwood, Cincinnati, O.
- ◆ **Sherman Mfg. Co., E. B.**, Battle Creek, Mich.
- Standard Brass & Iron, Milwaukee, Wis.
- Standard Brass Casting Co., Oakland, Calif.
- Stebbins Mfg. Co., E., Springfield, Mass.

**COCKS, HYDRANT.**

- Alliance Brass Foundry Co., Detroit, Mich.
- American Foundry & Mfg. Co., St. Louis, Mo.
- C. C.—Crane Co., Chicago, Ill.
- Detroit Brass & Malleable Works, Detroit, Mich.
- ◆ **Exeter Brass Works**, Exeter, N. H.
- Farnan Brass Works Co., The, Cleveland, O.
- Flannery, P. J., Co., New Britain, Conn.
- Fries & Co., Buffalo, N. Y.
- Gibson Bros. Mfg. Co., North Chicago, Ill.
- Glauber Brass Mfg. Co., Cleveland, O.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.
- Haydenville Co., The, Haydenville, Mass.
- ◆ **Hays Mfg. Co.**, Erie, Pa.
- Hoffman & Billings Mfg. Co., Milwaukee, Wis.

- ◆ Kelly & Jones Co., The, Greensburg, Pa.  
Kitson Co., Philadelphia, Pa.  
Lyons—Cleveland Brass Mfg. Co., Cleveland, O.  
Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
McCambridge Co., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Monarch—Monarch Brass Co., The, Cleveland, O.  
Mueller Mfg. Co., H., Decatur, Ill.  
Park & McKay Co., The, Detroit, Mich.  
P. B.—The Peck Bros. & Co., New Haven, Conn.  
Perkes, Chas., Co., Philadelphia, Pa.  
Powhatan Brass & Iron Works, Ranson, W. Va.  
Rockford Brass Works, Rockford, Ill.  
Standard Sanitary Mfg. Co., Pittsburg, Pa.  
Union Water Meter Co., Worcester, Mass.
- ◆ United—United Brass Mfg. Co., Cleveland, O.  
Volkhart—Volkhart Company, Inc., Stapleton, N. Y.
- ◆ Walworth Mfg. Co., Boston, Mass.  
Wolff Mfg. Co., Chicago, Ill.

**COCKS, HYDRAULIC.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
Bordo—L. J. Bordo Co., Philadelphia, Pa.  
Buckeye Iron & Brass Works, Dayton, O.  
Hays Mfg. Co., Erie, Pa.
- ◆ Homestead Valve Mfg. Co., Homestead, Pa.  
Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ McGowan—John H. McGowan Co., The, Cincinnati, O.  
Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.

**COCKS, INDICATOR.**

- ◆ American—American Lubricator Co., Detroit, Mich.  
American Ideal—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- ◆ Cooper—American Lubricator Co., Detroit, Mich.
- ◆ Essex—Essex Brass Corp., Detroit, Mich.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Jost's Sons, Edmund, Newark, N. J.  
Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Lunkenheimer Co., Cincinnati, O.
- ◆ McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ McEae & Roberts Co., Detroit, Mich.
- ◆ Michigan Lubricator Co., Detroit, Mich.
- ◆ Milwaukee Valve Co., Milwaukee, Wis.
- ◆ Mueller Mfg. Co., H., Decatur, Ill.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Sherwood Three-Way—Sherwood Mfg. Co., Buffalo, N. Y.  
Strait—American Lubricator Co., Detroit, Mich.

**COCKS, ALL IRON.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
Belfield, H., Co., Philadelphia, Pa.  
Bridgman Bros. Co., Philadelphia, Pa.  
Buckeye Iron & Brass Works, Dayton, O.  
Crane—Crane Co., Chicago, Ill.  
Crane Valve Co., Bridgeport, Conn.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
Gibson Bros. Mfg. Co., North Chicago, Ill.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Homestead Valve Mfg. Co., Homestead, Pa.
- ◆ Jarecki Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.  
Landers, Frary & Clark, New Britain, Conn.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Pittsburg Valve & Fittings Co., Barberton, O.
- ◆ Walworth Mfg. Co., Boston, Mass.

**COCKS, KEY.**

Sherwood Brass Works, Detroit, Mich.

**COCKS, LAMP POST.**

- Mueller Mfg. Co., H., Decatur, Ill.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ Walworth Mfg. Co., Boston, Mass.

**COCKS, LARD TANK.**

- Gibson Bros. Mfg. Co., North Chicago, Ill.
- ◆ Kelly & Jones Mfg. Co., The, Greensburg, Pa.  
Street & Kent Mfg. Co., Chicago, Ill.

**COCKS, LAUNDRY TRAY, MIXING.**

Burman Unit—Burman Specialty Co., Minneapolis, Minn.

**COCKS AND BIBBS, LAUNDRY TRAY, STUB PATTERN.**

- Acme—Acme Brass Works, Detroit, Mich.
- Alliance Brass Foundry Co., Detroit, Mich.
- Capitol—Capitol Brass Works, Detroit, Mich.
- Empire—The Empire Brass Mfg. Co., Cleveland, O.
- Flannery, P. J., Co., New Britain, Conn.
- Gibson Bros. Mfg. Co., North Chicago, Ill.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Hays Mfg. Co., Erie, Pa.
- Kruecke Bros. Mfg. Co., Milwaukee, Wis.

Loyal Brass Co., Cleveland, Ohio.  
Monarch—Monarch Brass Mfg. Co., The, Cleveland, O.  
Mueller Mfg. Co., H., Decatur, Ill.  
Nelson, N. J., Mfg. Co., St. Louis, Mo.  
Nopack—Nopack Brass Mfg. Co., Du Bois, Pa.  
Oberndorf Mfg. Co., The, Pittsburg, Pa.  
Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
Rick—Rickersberg Brass Co., Cleveland, Ohio.  
Royal Brass Mfg. Co., Cleveland, O.  
Saxon, Vigilant—J. D. Johnson Co., Philadelphia, Pa.  
Shorto—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Sterling Brass Co., The, Cleveland, O.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
United—United Brass Mfg. Co., Cleveland, O.  
Wolff Mfg. Co., Chicago, Ill.

**COCKS, LAVATORY, STOP.**

(See Cocks, Stops or Valves, Lavatory)

**COCKS, LEAD FLANGE, STOP.**

- Alliance Brass Foundry Co., Detroit, Mich.
- Glauber Brass Mfg. Co., Cleveland, O.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Hays Mfg. Co., Erie, Pa.
- Mueller Mfg. Co., H., Decatur, Ill.
- Rick—Rickersberg Brass Co., Cleveland, O.

**COCKS AND VALVES, LEAD LINED.**

Lead Lined Iron Pipe Co., Wakefield, Mass.

**COCKS, LOCK, FOR GAS, OIL, ETC.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- ◆ Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.
- Essex—Pittsburgh Valve & Fittings Co., Barberton, O.
- Flannery, P. J., Co., New Britain, Conn.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kitson Co., Philadelphia, Pa.
- Landers, Frary & Clark, New Britain, Conn.
- Lock Fast—Wilson & Bennett Mfg. Co., Chicago, Ill.
- Perkes, Chas., Estate, Philadelphia, Pa.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ Mueller Mfg. Co., H., Decatur, Ill.
- National—National Brass Mfg. Co., Rochester, N. Y.
- Okay—E. Stebbins Mfg. Co., Springfield, Mass.
- Peck Bros. & Co., The, New Haven, Conn.
- ◆ Powell Co., Wm., The, Cincinnati, O.
- Powhatan Brass & Iron Works, Ranson, W. Va.
- Rockford Brass Works, Rockford, Ill.
- ◆ Walworth Mfg. Co., Boston, Mass.
- W. & B.—Wilson & Bennett Mfg. Co., Chicago, Ill.
- Wilton—Wilton Mfg. Co., Wrightsville, Pa.
- Wolff Mfg. Co., Chicago, Ill.

**COCKS, LOCK SHIELD.**

- Central—The Central Brass Mfg. Co., Cleveland, O.
- Exeter Brass Works, Exeter, N. H.
- Gibson Bros. Mfg. Co., North Chicago, Ill.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Monarch—Monarch Brass Co., The, Cleveland, O.
- North Star Foundry Co., Minneapolis, Minn.
- Paragon—Vulcan Brass Mfg. Co., Cleveland, O.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Richter—Richter & Co., Cincinnati, O.
- Sterling Brass Co., The, Cleveland, O.

**COCKS, NEWPORT PATTERN.**

(See "Cocks, Stop and Waste.")

**COCKS (AND BIBBS), "NU" RAPID.**

Glauber Brass Mfg. Co., Cleveland, O.

**COCKS, OIL.**

- A-B Stove Co., Dept. S, Battle Creek, Mich.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Buckeye Iron & Brass Works, Dayton, O.
- Federal-Huber Co., Chicago, Ill.
- Flannery, P. J., Co., New Britain, Conn.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Homestead Valve Mfg. Co., Homestead, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Landers, Frary & Clark, New Britain, Conn.
- Lunkenheimer Co., The, Cincinnati, O.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ McEae & Roberts Co., The, Detroit, Mich.
- National Brass Mfg. Co., Rochester, N. Y.
- Peck Bros. & Co., The, New Haven, Conn.
- Perkes, Chas., Co., Philadelphia, Pa.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- Rauch Mfg. Co., Galena, Kan.
- ◆ Roberts Brass Mfg. Co., The, Detroit, Mich.
- Tokheim—The Tokheim Mfg. Co., Inc., Cedar Rapids, Iowa.

Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wilton Mfg. Co., Wrightsville, Pa. (lock).

**COCKS, OIL COUNTRY.**

Haydenville Co., The, Haydenville, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS OR FAUCETS, OIL WAGON AND STORAGE TANK.**

Cleclock—The Cleveland Brass Mfg. Co., Cleveland, Ohio.  
 Exeter Brass Works, Exeter, N. H.  
 Flannery, P. J., Co., New Britain, Conn.  
 Haydenville Co., The, Haydenville, Mass.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Morrison Bros., Dubuque, Ia.  
 National—National Brass Mfg. Co., Rochester, N. Y.  
 Pioneer Alloy Products Co., Cleveland, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 W. & B.—Wilson & Bennett Mfg. Co., Chicago, Ill.  
 Wheaton Brass Works, A. W., Newark, N. J.  
 Wilton—Wilton Mfg. Co., Wrightsville, Pa.

**COCKS, PANTRY, COMPRESSION.**

Bay State Brass Co., Haydenville, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Crane Co., Chicago, Ill.  
 Du Bois, F. N. & Co., Inc., The, New York.  
 Essex—F. W. Webb Mfg. Co., Boston, Mass.  
 Exeter Brass Works, Exeter, N. H.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Globe Brass Mfg. Co., The, Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury, Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffman & Billings Mfg. Co., Milwaukee, Wis.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Melrose—F. W. Webb Mfg. Co., Boston, Mass.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Quatern—Chicago Faucet Co., The, Chicago, Ill.  
 Quickpression—The Central Brass Mfg. Co., Cleveland, O.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Wolff Mfg. Co., Chicago, Ill.

**COCKS, PANTRY, FULLER.**

Bay State Brass Co., Haydenville, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
 Crampton-Farley Brass Co., Kansas City, Mo.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Imperial—The Imperial Co., Grove City, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.

**COCKS, PANTRY, GROUND KEY.**

Haydenville Co., The, Haydenville, Mass.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.

**COCKS, PANTRY, SELF-CLOSING.**

Boston—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Boston—The Brookside Brass Foundry Mfg. Co., Cleveland, O.  
 Boston—The Haydenville Co., Haydenville, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Chi-Fau-Co.—Chicago Faucet Co., Chicago, Ill.  
 Doherty—F. N. Dubois & Co., New York, N. Y.  
 Doherty—The Haydenville Co., Haydenville, Mass.  
 Doherty—Wolff Mfg. Co., Chicago, Ill.

Doherty—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Doherty—The Brookside Brass Foundry Mfg. Co., Cleveland, O.  
 Doherty—The Peck Bros. & Co., New Haven, Conn.  
 Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Gialow—Wolff Mfg. Co., Chicago, Ill.  
 Milwaukee—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Moores—The Peck Bros. & Co., New Haven, Conn.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Peerless—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Perry—Federal-Huber Co., Chicago, Ill.  
 Pierce—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Quatern—The Chicago Faucet Co., Chicago, Ill.  
 Standard—Prior Brass Mfg. Co., Kansas City, Mo.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Telegraph—The Haydenville Co., Haydenville, Mass.

**COCKS, PET.**

American—American Water Motor Co., Columbus, O.  
 Buckeye Iron & Brass Works, Dayton, O.  
 ♦ Detroit & Malleable Works, Detroit, Mich.  
 Essex Brass Corp., Detroit, Mich.  
 Frank Bros., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 Monash-Younger Co., Chicago.  
 Peninsular Brass Works, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Standard Brass Works, Detroit, Mich.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, PLUG.**

Duriron (Acid Proof)—The Duriron Co., Inc., Dayton, O.  
 Exeter Brass Works, Exeter, N. H.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 Judson Governor Co., Rochester, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McGowan—John H. McGowan Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Perfection—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**COCKS, RACKING.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Landers, Frary & Clark, New Britain, Conn.

**COCKS, RAIN AND WELL WATER.**

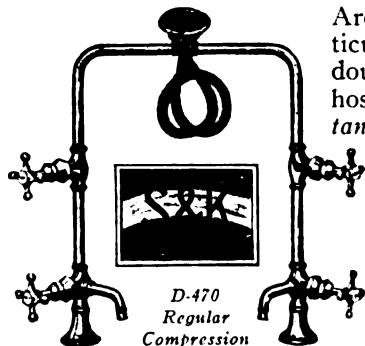
Powhatan Brass & Iron Works, Ranson, W. Va.

**COCKS, RANGE BOILER.**

(See also "Cock, Draw-off.")

Alliance Brass Foundry Co., Detroit, Mich.  
 American—American Water Motor Co., Columbus, Ohio.  
 Belknap Mfg. Co., The, Bridgeport, Conn.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Cochrane, J. A., Brass Mfg. Co., Cleveland, O.  
 Globe Brass Mfg. Co., Cleveland, Ohio.  
 Haydenville Co., The, Haydenville, Mass.  
 Kruecke Bros. Mfg. Co., Milwaukee, Wis.  
 ♦ Lukonski Brothers Co., Detroit, Mich.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 Nichol, Thos. J. & Co., Cincinnati, O.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Royal—Royal Brass Mfg. Co., Cleveland, O.  
 ♦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.  
 Standard Brass Casting Co., Oakland, Calif.  
 Sterling Specialty Co., Newcomerstown, O.  
 Stone, Mark, Mfg. Co., Grand Rapids, Mich.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United Brass Mfg. Co., Cleveland, O.  
 Utica Valve & Fixture Co., Utica, N. Y.  
 Woodhill Brass Co., The, Cleveland, O.

# The "S&K" Rainbow Special Compression Shampoo Fixtures



Are strictly high-grade products in every particular, and their low price renders them doubly attractive. Furnished complete with hose and sprinkler. *In ordering specify distance from center to center of cock holes.*

One of our new fixtures shown in Cut D-471, embodies all the merits surrounding Quick Compression Work. They are quick action and time savers for the operator.

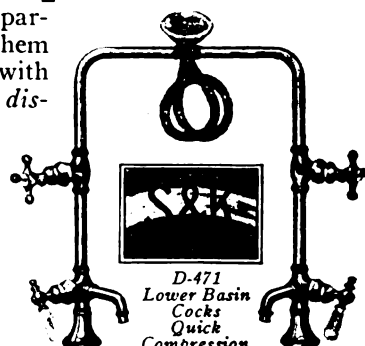
S&K products are standard and for high-grade work no better fixture can be found. It is to the advantage of every jobber and plumber to be familiar with our line. Write for prices.

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STREET & KENT MFG. CO.,

1956 Clybourn Ave.,

CHICAGO, ILL.



## COCKS, REFILL.

♦ Powell Co., The Wm., Cincinnati, O.

## COCKS OR FAUCETS, REFRIGERATOR.

Haydenville Co., The, Haydenville, Mass.  
National Brass Mfg. Co., Rochester, N. Y.  
Peninsular Brass Works, Detroit, Mich.  
Perkes, Chas., Co., Philadelphia, Pa.

## COCKS, REGRINDING.

♦ Kelly & Jones Co., The, Greensburg, Pa.  
♦ McRae & Roberts Co., Detroit, Mich.  
♦ Powell Co., The Wm., Cincinnati, O.

## COCKS, RELIEF.

♦ American—American Lubricator Co., Detroit, Mich.  
Haydenville Co., The, Haydenville, Mass.  
♦ McRae & Roberts Co., The, Detroit, Mich.  
♦ Powell Co., The Wm., Cincinnati, O. (gas engine).  
W.-McD.—Watson & McDaniel Co., Philadelphia, Pa.

## COCKS OR BIERE, SELF-CLOSING, BALL AND ROLLER BEARING.

Glauber Brass Mfg. Co., Cleveland, O.  
Haydenville Co., Haydenville, Mass.  
Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Mueller, H., Mfg., Co., Decatur, Ill.  
Paragon—Vulcan Brass Mfg. Co., Cleveland, O.

## COCKS, SHAMPOO.

Edwardsville Brass Co., Edwardsville, Ill.  
Excelsior—J. D. Johnson Co., Philadelphia, Pa.  
Federal-Huber Co., Chicago, Ill.  
Garrison Brass & Mach. Co., New York, N. Y.  
Globe Brass Mfg. Co., The, Cleveland, O.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia  
Haydenville Co., The, Haydenville, Mass.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Mott Iron Works, The J. L., Trenton, N. J.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
Perkes, Chas., Co., Philadelphia, Pa.  
Rainbow—Street & Kent Co., Chicago, Ill.  
Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Rundie Mfg. Co., Milwaukee, Wis.  
Standard Sanitary Mfg. Co., Pittsburg, Pa.  
Street & Kent Mfg. Co., Chicago, Ill.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.

## COCKS OR VALVES, SHOWER, SELF-CLOSING.

Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
(Trade names—Ball-Bearing, Crown, Star.)

## COCKS OR VALVES, SHOWER BATH MIXING.

(See also "Baths, Shower.")

Boston—Haydenville Co., Haydenville, Mass.  
Boston—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Columbia—Haelscher Bros., Chicago, Ill.  
Crane Co., Chicago, Ill.  
Duplex—Haines, Jones & Cadbury Co., Philadelphia  
Edwardsville Brass Works, Edwardsville, Ill.  
Elm, Webco—F. W. Webb Mfg. Co., Boston, Mass.  
Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
Equality—Haines, Jones & Cadbury Co., Philadelphia  
Extra Pattern—Wolff Mfg. Co., The, Cleveland, O.  
Farnan—Farnan Brass Works Co., The, Cleveland, O.

Ford—The Thomas P. Ford Co., New York, N. Y.  
Geo—Geo. Cody Co., New York, N. Y.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia  
Haydenville Co., The, Haydenville, Mass.  
Ingham—The Imperial Brass Mfg. Co., Chicago, Ill.  
Leonard—Leonard-Rooke Co., Providence, R. I.  
Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Milwaukee Flush Valve Co., Milwaukee, Wis.  
Mixometer—Speakman Company, Wilmington, Del.  
M-VB Tempurator—Sturgis Company, Sturgis, Mich.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
New Jersey Tube Co., New York.  
Niedecken—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.

Non-Scalding—McCambridge Co., Philadelphia, Pa.  
Onlegood—The Central Sanitary Co., Bellefonte, Pa.  
Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
Peck Bros. & Co., The, New Haven, Conn.  
Perkes, Chas., Co., Philadelphia, Pa.  
Pilot—Hedges & Bro., Newark, N. J.  
Royal Brass Mfg. Co., The, Cleveland, O.  
Sanitas Mfg. Co., Boston, Mass.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Securo—The J. L. Mott Iron Works, Trenton, N. J.  
Soderlund—Stebbins Mfg. Co., E. Springfield, Mass.  
Standard Sanitary Mfg. Co., Pittsburg, Pa.  
Starwal—Warner-Reiss Sales Co., St. Louis, Mo.  
Street & Kent Mfg. Co., Chicago, Ill.  
Surety "Non-scalding"—Dalton-Ingersoll Mfg. Co., Boston, Mass.

Thermo—The J. L. Mott Iron Works, New York, N. Y.  
Trinity—Goets Brass Co., Chicago, Ill.  
XOI—Reid Brass Mfg. Co., Brooklyn, N. Y.

## COCKS, SILL, COMPRESSION.

Acme—Acme Brass Works, Detroit, Mich.  
Alliance Brass Foundry Co., Detroit, Mich.  
American Brass Mfg. Co., The, Cleveland, O.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Bay State Brass Co., Haydenville, Mass.  
Boston—Street & Kent Mfg. Co., Chicago, Ill.  
Central—The Central Brass Mfg. Co., Cleveland, O.  
Cochrane, J. A., Brass Mfg. Co., Cleveland, O.  
Crane Co., Chicago, Ill.  
D. C.—D. C. Mfg. Co., Canton, O.  
Dayton—McCormick Mfg. Co., Dayton, O.  
Dearborn Brass Co., Cedar Rapids, Ia.  
Dick—Dick Bros., Inc., Reading, Pa.  
Elgin Brass Co., Cleveland, O.  
Empire Brass Mfg. Co., Cleveland, O.  
Exeter Brass Works, Exeter, N. H.  
Farnan Brass Works Co., The, Cleveland, O.  
Faultless—J. J. Ryan & Co., Chicago, Ill.  
Federal-Huber Co., Chicago, Ill.  
Fries & Co., Buffalo, N. Y.  
Garratt & Co., W. T., San Francisco, Cal.  
Gem Brass Mfg. Co., Cleveland, Ohio.  
Gibson Bros. Mfg. Co., North Chicago, Ill.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia  
Haydenville Co., The, Haydenville, Mass.  
♦ Hays Mfg. Co., Erie, Pa.  
♦ Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
♦ Humphreys Mfg. Co., The, Mansfield, O.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Kinsey & Mahler Co., Peoria, Ill.  
Kruecke Bros., Mfg. Co., Milwaukee, Wis.  
Landers, Frary & Clark, New Britain, Conn.  
Loyal Brass Co., Cleveland, O.  
Lukomski Brothers Co., Detroit, Mich.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McNab & Harlan Mfg. Co., New York, N. Y.



- ♦ **McRae & Roberts Co.**, Detroit, Mich.
- Milwaukee Brass Mfg. Co.**, Milwaukee, Wis.
- Milwaukee—Street & Kent Mfg. Co.**, Chicago, Ill.
- Monarch—Monarch Brass Co.**, The, Cleveland, O.
- Mueller Mfg. Co.**, H., Decatur, Ill.
- Nelson, N. O.**, Mfg. Co., St. Louis, Mo.
- Oberndorf Mfg. Co.**, The, Pittsburg, Pa.
- Okay—E. Stebbins Mfg. Co.**, Springfield, Mass.
- Paragon—Vulcan Brass Mfg. Co.**, Cleveland, O.
- Peck Bros. & Co.**, The, New Haven, Conn.
- Penn Brass Mfg. Co.**, Cleveland, O.
- Perkes, Chas.**, Co., Philadelphia, Pa.
- Powhatan Brass & Iron Works**, Charles Town, W. Va.
- Prier Brass Mfg. Co.**, Kansas City, Mo.
- Richter—Richter & Co.**, Cincinnati, O.
- Rick—The Rickersberg Brass Co.**, Cleveland, O.
- Royal Quality—The Royal Brass Mfg. Co.**, Cleveland, O.
- Rundie Mfg. Co.**, Milwaukee, Wis.
- Schlangen Bros. Co.**, Chicago, Ill.
- Schwander—Schwander Brass Mfg. Co.**, St. Louis, Mo.
- ♦ **Sherman Mfg. Co., H. B.**, Battle Creek, Mich.
- Standard Brass Casting Co.**, Oakland, Calif.
- Stebbins Mfg. Co., E.**, Springfield, Mass.
- Sterling—Sterling Specialty Co.**, Newcomerstown, Ohio.
- Sterling Brass Co.**, The, Cleveland, O.
- Street & Kent Mfg. Co.**, Chicago, Ill.
- Trenton Brass & Machine Co.**, The, Trenton, N. J.
- Union Brass & Metal Mfg. Co.**, St. Paul, Minn.
- Union—Union Brass Mfg. Co.**, Cleveland, O.
- ♦ **United—United Brass Mfg. Co.**, Cleveland, O.
- ♦ **Walworth Mfg. Co.**, Boston, Mass.
- Wolf Mfg. Co.**, Chicago, Ill.
- Woodhill Brass Co.**, The, Cleveland, O.

**COCKS, SINK, HOT AND COLD MIXING.**

- H. K. Triplex Sink—Kretschmer Mfg. Co.**, Dubuque, Ia.
- Kold-or-Hot—Superior Brass Novelty Co.**, New York, N. Y.
- Mueller Mfg. Co.**, H., Decatur, Ill.
- New Jersey Tube Co.**, New York.
- Quatern—Chicago Faucet Co.**, The, Chicago, Ill.
- Soap Dish Classic—The Chicago Faucet Co.**, Chicago, Ill.

**COCKS, SLIP JOINT, COMPRESSION.**

- Alliance Brass Foundry Co.**, Detroit, Mich.
- American Foundry & Mfg. Co.**, St. Louis, Mo.
- Globe Brass Mfg. Co.**, Cleveland, O.
- Hajoca—Haines, Jones & Cadbury Co.**, Philadelphia.
- Haydenville Co.**, The, Haydenville, Mass.
- ♦ **Hays Mfg. Co.**, Erie, Pa.
- McDonald Mfg. Co.**, A. Y., Dubuque, Ia.
- Mueller Mfg. Co.**, H., Decatur, Ill.
- Nelson, N. O.**, Mfg. Co., St. Louis, Mo.
- S. & K.—Street & Kent Mfg. Co.**, Chicago, Ill.
- Stebbins Mfg. Co.**, E., Springfield, Mass.
- Sterling Brass Co.**, Cleveland, O.

**COCKS, SLOP SINK.**

- Hajoca—Haines, Jones & Cadbury Co.**, Philadelphia.
- Haydenville Co.**, The, Haydenville, Mass.
- Hoffmann & Billings Mfg. Co.**, Milwaukee, Wis.
- Milwaukee Brass Mfg. Co.**, Milwaukee, Wis.
- Nelson, N. O.**, Mfg. Co., St. Louis, Mo.
- Peck's Improved—The Peck Bros. & Co.**, New Haven, Conn.
- Saxon—J. D. Johnson Co.**, Philadelphia, Pa.
- Street & Kent Mfg. Co.**, Chicago, Ill.
- Union Brass & Metal Mfg. Co.**, St. Paul, Minn.

**COCKS, SOAP MAKERS.**

- ♦ **Homestead Valve Mfg. Co.**, Homestead, Pa.
- ♦ **McGowan—John H. McGowan Co.**, The, Cincinnati, O.
- Nelson, N. O.**, Mfg. Co., St. Louis, Mo.

**COCKS, SPRING PLUG.**

- ♦ **McRae & Roberts Co.**, Detroit, Mich.
- ♦ **Powell, Wm.**, Co., The, Cincinnati, O.
- ♦ **Walworth—Walworth Mfg. Co.**, Boston, Mass.

**COCKS, STEAM.**

- Alliance Brass Foundry Co.**, Detroit, Mich.
- ♦ **American—American Injector Co.**, Detroit, Mich.
- ♦ **American—American Lubricator Co.**, Detroit, Mich.
- Buckeye Iron & Brass Works**, Dayton, O.
- Buffalo—Fries & Co.**, Buffalo, N. Y.
- Crane Co.**, Chicago, Ill.
- Crosby Steam Gauge & Valve Co.**, Boston, Mass.
- Detroit Valve & Fittings and Detroit Brass Works**, Detroit, Mich.
- Duriron—Duriron Castings Co.**, Dayton, O.
- Edna Brass Mfg. Co.**, The, Cincinnati, O.
- Exeter Brass Works**, Exeter, N. H.
- Farnan Brass Works Co.**, The, Cleveland, O.
- Flannery, P. J.**, Co., New Britain, Conn.
- Fries & Co.**, Buffalo, N. Y.
- Gibson Bros. Mfg. Co.**, North Chicago, Ill.
- Glauber Brass Mfg. Co.**, Cleveland, O.

- Griffiths, James A.**, Philadelphia, Pa.
- Haydenville Co.**, The, Haydenville, Mass.
- ♦ **Hays Mfg. Co.**, Erie, Pa.
- Healey, Peter**, Brass Foundry Co., Evansville, Ind.
- Hennebelle Co.**, Chicago, Ill.
- ♦ **Homestead Valve Mfg. Co.**, Homestead, Pa.
- ♦ **Indicator—Michigan Lubricator Co.**, Detroit, Mich.
- ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.
- K. M.—Kinsey & Mahler Co.**, Peoria, Ill.
- ♦ **Lunkenheimer Co.**, The, Cincinnati, O.
- McDonald Mfg. Co.**, A. Y., Dubuque, Ia.
- McNab & Harlin Mfg. Co.**, New York, N. Y.
- ♦ **McRae & Roberts Co.**, Detroit, Mich.
- ♦ **Michigan Lubricator Co.**, Detroit, Mich.
- Mueller Mfg. Co.**, H., Decatur, Ill.
- Nichol & Co.**, Thos. J., Cincinnati, O.
- Okay—E. Stebbins Mfg. Co.**, Springfield, Mass.
- P. & C.—The Pratt & Cady Co.**, Hartford, Conn.
- Perkes, Chas.**, Co., Philadelphia, Pa.
- Pittsburg Valve, Fdy. & Construction Co.**, Pittsburg, Pa.
- Pittsburg Valve & Fittings Co.**, Barberton, O.
- ♦ **Powell Co.**, The, Wm., Cincinnati, O.
- Powhatan Brass & Iron Works**, Ranson, W. Va.
- Rockford Brass Works**, Rockford, Ill.
- Trefethen, D. A.**, Taunton, Mass.
- ♦ **United—United Brass Mfg. Co.**, Cleveland, O.
- Utica Valve & Fixture Co.**, Utica, N. Y.
- ♦ **Walworth Mfg. Co.**, Boston, Mass.

**COCKS, STEAM GAGE.**

- Buckeye Iron & Brass Works**, Dayton, O.
- ♦ **McRae & Roberts Co.**, Detroit, Mich.
- National Brass Mfg. Co.**, Rochester, N. Y.
- ♦ **Powell, Wm.**, Co., The, Cincinnati, O.
- ♦ **Sterling & Skinner Mfg. Co.**, Detroit, Mich.
- United States Gauge Co.**, New York.

**COCKS, STOP, FULLER.**

- Glauber Brass Mfg. Co.**, Cleveland, O.
- Hoffmann & Billings Co.**, Milwaukee, Wis.
- Milwaukee Brass Mfg. Co.**, Milwaukee, Wis.
- Mueller Mfg. Co.**, H., Decatur, Ill.

**COCKS, STOP, AND STOP AND WASTE, COMPRESSION.**

- Alliance Brass Foundry Co.**, Detroit, Mich.
- American Brass Mfg. Co.**, The, Cleveland, O.
- American Foundry & Mfg. Co.**, St. Louis, Mo.
- Bashlin Co.**, The, Warren, Ohio.
- Bay State Brass Co.**, Haydenville, Mass.
- Bison—Fries & Co.**, Buffalo, N. Y.
- Buckeye Brass Foundry & Mfg. Co.**, Cleveland, O.
- Buffalo—Fries & Co.**, Buffalo, N. Y.
- Canton—D. C. Mfg. Co.**, Canton, O.
- Clebra, Cleveco, Prestop, Wastop—Cleveland Brass Mfg. Co.**, Cleveland, O.
- Clow Special—James B. Clow & Sons**, Chicago, Ill.
- Cochrane, J. A.**, Brass Mfg. Co., The, Cleveland, O.
- Connolly's—Connolly Supply Co.**, Brooklyn, N. Y.
- Crampton-Farley Brass Co.**, Kansas City, Mo.
- Dart—E. M. Dart Mfg. Co.**, Providence, R. I.
- Dearborn Brass Co.**, Cedar Rapids, Ia.
- Dick Bros., Inc.**, Reading, Pa.
- Edna Brass Mfg. Co.**, The, Cincinnati, O.
- Edwardsville Brass Works**, Edwardsville, Ill.
- Elgin Brass Co.**, New York, N. Y.
- Elm—F. W. Webb Mfg. Co.**, Boston, Mass.
- Empire—The Empire Brass Mfg. Co.**, Cleveland, O.
- Exeter Brass Works**, Exeter, N. H.
- Extra Pattern—Wolf Mfg. Co.**, Chicago, Ill.
- Farnan—Farnan Brass Works**, Cleveland, O.
- Federal-Huber Co.**, Chicago, Ill.
- Flannery, P. J.**, Co., New Britain, Conn.
- Ford—Ford Meter Box Co.**, Wabash, Ind.
- Franklin Brass Mfg. Co.**, Philadelphia, Pa.
- Garrett & Co.**, W. T., San Francisco, Cal.
- Gem Brass Mfg. Co.**, Cleveland, Ohio.
- Gibson Bros. Mfg. Co.**, North Chicago, Ill.
- Glauber Brass Mfg. Co.**, Cleveland, O.
- Globe Brass Mfg. Co.**, The, Cleveland, O.
- Hajoca—Haines, Jones & Cadbury Co.**, Philadelphia, Pa.
- Hanover—F. W. Webb Mfg. Co.**, Boston, Mass.
- Haydenville Co.**, The, Haydenville, Mass.
- ♦ **Haysco—Hays Mfg. Co.**, Erie, Pa.
- Hoffmann & Billings Mfg. Co.**, Milwaukee, Wis.
- Jaroco—James Robertson Mfg. Co.**, Baltimore, Md.
- ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.
- Kitsen Co.**, Philadelphia, Pa.
- Knox—Knox Mfg. Co.**, Philadelphia, Pa.
- Kruecke Bros.**, Mfg. Co., Milwaukee, Wis.
- Landers, Frary & Clark**, New Britain, Conn.
- Leader—Randle Mfg. Co.**, The, Cincinnati, O.
- Leeder—Woodward-Wanger Co.**, Philadelphia, Pa.
- Loyal Brass Co.**, Cleveland, O.
- McCambridge Co.**, Philadelphia, Pa.
- McDonald Mfg. Co.**, A. Y., Dubuque, Ia.
- McNab & Harlin Mfg. Co.**, New York, N. Y.
- ♦ **McRae & Roberts Co.**, Detroit, Mich.
- Milwaukee Brass Mfg. Co.**, Milwaukee, Wis.
- Monarch—Monarch Brass Co.**, The, Cleveland, O.
- Mueller Mfg. Co.**, H., Decatur, Ill.

Mullaney—James Mullaney's Sons, New York, N. Y.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Newark Brass Works, Newark, N. J. (special).  
 Nichol, Thos. J. & Co., Cincinnati, O.  
 Oberndorf Mfg. Co., The, Pittsburgh, Pa.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Penn Brass Mfg. Co., Cleveland, O.  
 ♦ **Powell Co., The Wm., Cincinnati, O.**  
 Regle Work—Regle Brass Co., Greenville, Mich.  
 Relyo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Richter & Co., Cincinnati, O.  
 Rick—Rickersberg Brass Co., Cleveland, O.  
 Roberts Brass Mfg. Co., Detroit, Mich.  
 Royal Quality—Royal Brass Mfg. Co., The, Cleveland, O.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Schulte Brass Mfg. Co., Norwood, Cincinnati, O.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 ♦ **Sherman Mfg. Co., E. B., Battle Creek, Mich.**  
 Standard Brass Casting Co., Oakland, Calif.  
 Star—F. W. Webb Mfg. Co., Boston, Mass.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Sterling Brass Co., The, Cleveland, O.  
 Sterling Specialty Co., Newcomerstown, O.  
 Triumph—Ohio Pump & Brass Co., Columbus, Ohio.  
 Trojan Brass Mfg. Co., The, Cincinnati, O.  
 Union Brass Mfg. Co., Cleveland, O.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Utica—Utica Valve & Fixture Co., Utica, N. Y.  
 ♦ **Walworth Mfg. Co., Boston, Mass.**  
 Wolff Mfg. Co., Chicago, Ill.  
 Woodhill—The Woodhill Brass Co., Cleveland, O.

#### COCKS, STOP, AND STOP AND WASTE, GROUND KEY.

Acme Brass Works, Cleveland, O.  
 Acorn Pattern—Columbus Brass Co., Columbus, O.  
 Alliance Brass Foundry Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Brass Mfg. Co., The, Cleveland, O.  
 A. & O.—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Atlas Brass Mfg. Co., Cleveland, O.  
 Barrett Patent—The Cleveland Brass Mfg. Co., Cleveland, O.  
 Bay State Brass Co., Haydenville, Mass.  
 Bison—Fries & Co., Buffalo, N. Y.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 Canton—The D. C. Mfg. Co., Canton, Ohio.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Cleveland Brass Mfg. Co., Cleveland, O.  
 Cochrane, J. A., Brass Mfg. Co., Cleveland, O.  
 Crane Co., Chicago, Ill.  
 Crescent Mfg. Co., Scottsdale, Pa.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Duro—Wolff Mfg. Co., Chicago, Ill.  
 Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Farnan—Farnan Brass Works Co., The, Cleveland, O.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Flannery, P. J., Co., New Britain, Conn.  
 Fries & Co., Buffalo, N. Y.  
 Garratt & Co., W. T., San Francisco, Cal.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Globe Brass Mfg. Co., The, Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hamlin & Emery Brass Co., The, Boston, Mass.  
 Hancock Mfg. Co., Charlotte, Mich.  
 Hayden—The Haydenville Co., Haydenville, Mass.  
 ♦ **Hays Mfg. Co., Erie, Pa.**  
 Healey Brass Foundry Co., Peter, Evansville, Ind.  
 Hedges & Bro., Newark, N. J.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Jaroco—James Robertson Mfg. Co., Baltimore, Md.  
 ♦ **Kelly & Jones Co., The, Greensburg, Pa.**  
 Kelly—Thos. Kelly & Bro., Chicago, Ill.  
 Kitson—The Kitson Co., Philadelphia, Pa.  
 K. M.—Kinsey & Mahler Co., Peoria, Ill.  
 Lukomski Brothers Co., Detroit, Mich.  
 ♦ **Lunkenheimer Co., Cincinnati, O.**  
 Lyons—The Cleveland Brass Mfg. Co., Cleveland, O.  
 Malby, Geo. W. & Sons, Co., Buffalo, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ **McKee & Roberts Co., The, Detroit, Mich.**  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Monroe—Samuel Sloan & Co., Rochester, N. Y.  
 Mueller, H. Mfg. Co., Decatur, Ill.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Nichol & Co., Thos. J., Cincinnati, O.  
 Osborn—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Penn Brass Mfg. Co., Cleveland, O.

Perkes, Chas., Co., Philadelphia, Pa.  
 Perkins, H. K., Co., Taunton, Mass.  
 Pittsburgh Valve Fdy. & Const. Co., Pittsburgh.  
 ♦ **Powell, Wm., Co., The, Cincinnati, O.**  
 Powhatan Brass & Iron Works, Charles Town, W. Va.  
 Pratt & Cady Co., Hartford, Conn.  
 Richter—Richter Co., The, Cincinnati, O.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Rochester—Samuel Sloan & Co., Rochester, N. Y.  
 Rockford Brass Works, Rockford, Ill.  
 The Royal—Royal Brass Mfg. Co., Cleveland, O.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Schwander Brass Mfg. Co., St. Louis, Mo.  
 Standard Brass & Iron Co., Milwaukee, Wis.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Sterling Brass Co., The, Cleveland, O.  
 Total Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.  
 Union Brass Mfg. Co., Cleveland, O.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Water Meter Co., Worcester, Mass.  
 ♦ **United—United Brass Mfg. Co., Cleveland, O.**  
 Utica Valve and Fixture Co., Utica, N. Y.  
 ♦ **Walworth Mfg. Co., Boston, Mass.**  
 Wolff, Mfg. Co., Chicago, Ill.

#### COCKS, STOPS OR VALVES, LAVATORY.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Bay State Brass Co., Haydenville, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Cochrane J. A., Brass Mfg. Co., Cleveland, O.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Elgin Brass Co., New York, N. Y.  
 Eljer Co., Cameron, W. Va.  
 Exeter Brass Works, Exeter, N. H.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ **Hays Mfg. Co., Erie, Pa.**  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Ideal—The Ideal Mfg. Co., Detroit, Mich.  
 ♦ **Kelly & Jones Co., Greensburg, Pa.**  
 Loyal Brass Co., Cleveland, O.  
 Lukomski Brothers Co., Detroit, Mich.  
 McDonald Mfg. Co., A. Y., Dubuque, Iowa.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Oberndorf Mfg. Co., The, Pittsburgh, Pa.  
 Richter—Richter & Co., Cincinnati, O.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Wise, J. B., Watertown, N. Y.

#### COCKS (OR VALVES), AND STOPS, SHOWER BATH, SELF-CLOSING.

Haydenville Co., The, Haydenville, Mass.  
 Hoffman & Billing Mfg. Co., Milwaukee, Wis.  
 Oberndorf Mfg. Co., Pittsburgh, Pa.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Peck Bros. Co., New Haven, Conn.  
 Wolff Mfg. Co., Chicago, Ill.

#### COCKS, STOP AND WASTE, BROOKLYN PATTERN.

Gibson Bros. Mfg. Co., North Chicago, Ill.

#### COCKS, STOP AND WASTE, CHICAGO PATTERN.

Gibson Bros. Mfg. Co., North Chicago, Ill.

#### COCKS, STOP AND WASTE, MINNEAPOLIS PATTERN.

Bison—Fries & Co., Buffalo, N. Y.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ **Hays Mfg. Co., Erie, Pa.**  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.

#### COCKS, STOP AND WASTE, NEWPORT PATTERN.

Exeter Brass Works, Exeter, N. H.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.

#### COCKS, STOP AND WASTE, PHILADELPHIA PATTERN.

Gibson Bros. Mfg. Co., North Chicago, Ill.

#### COCKS, STOP, SELF-CLOSING.

Bashlin—The Bashlin Co., Warren, Pa.  
 Boston—Brookside Brass Foundry & Mfg. Co., Cleveland, O.

Boston—Haydenville Co., Haydenville, Mass.  
 Boston—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Broughton—Stebbins Mfg. Co., E., Springfield, Mass.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Chi-Fau-Co.—Chicago Faucet Co., Chicago, Ill.  
 Colonial—H. Mueller Mfg. Co., Decatur, Ill.  
 Crown—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Doherty—The Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Doherty—The Haydenville Co., Haydenville, Mass.  
 Doherty—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Doherty—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Doherty—Wolff Mfg. Co., Chicago, Ill.  
 Economy—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Peerless—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Ryan & Co., J. J., Chicago, Ill.  
 Star—Brookside Brass Foundry & Mfg. Co., Cleveland, O.  
 Viking—Hoffman & Billing Mfg. Co., Milwaukee, Wis.

**COCKS, STOP, SLIP JOINT.**

Central—The Central Brass Mfg. Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Gibson Bros. Mfg. Co., North Chicago, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville—The Haydenville Co., Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 New Jersey Tube Co., New York.  
 Ryan & Co., J. J., Chicago, Ill.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Wise, J. B., Watertown, N. Y.

**COCKS, STOP, WATERWORKS.**

Exeter Brass Works, Exeter, N. H.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Monarch—Monarch Brass Co., The, Cleveland, O.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Sterling Brass Co., The, Cleveland, O.  
 Union Water Meter Co., Worcester, Mass.  
 United—United Brass Mfg. Co., Cleveland, O.

**COCKS, STOVE.**

Loyal Brass Co., Cleveland, O.

**COCKS, SUPERHEATED STEAM.**

(See also Valves, Superheated Steam)

Homestead Valve Mfg. Co., Inc., Homestead, Pa.

**COCKS, THROTTLE, PNEUMATIC.**

♦ United Brass Mfg. Co., Cleveland, O.

**COCKS, TUYERE.**

(See Valves, Tuyere.)

Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.

**COCKS, URINAL, COMPRESSION.**

Buffalo—Fries & Co., Buffalo, N. Y.  
 Crane Co., Chicago, Ill.  
 Doherty—Wolff Mfg. Co., Chicago, Ill.  
 Du Bois, F. N. & Co., Inc., The, New York, N. Y.  
 Eljer—Eljer Co., Cameron, W. Va.  
 Exeter Brass Works, Exeter, N. H.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Lukomski Brothers Co., Detroit, Mich.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 United—United Brass Mfg. Co., Cleveland, O.

**COCKS, URINAL, FULLER.**

Crane Co., Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
 Peerless—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Wolff Mfg. Co., Chicago, Ill.

**COCKS, URINAL, SELF-CLOSING.**

Boston—Federal-Huber Co., Chicago, Ill.  
 Boston—L. Wolff Mfg. Co., Chicago, Ill.  
 Boston or Zane—Street & Kent Mfg. Co., Chicago, Ill.  
 Boston, Doherty—The Brookside Foundry & Mfg. Co., Cleveland, O.  
 Boston, Doherty—The Haydenville Co., Haydenville, Mass.  
 Doherty—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Doherty—Wolff Mfg. Co., Chicago, Ill.  
 Doherty—Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Doherty-Ejector—F. N. Dubois & Co., New York, N. Y.  
 Em-Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Farley—Crampton-Farley Brass Co., Kansas City, Mo.  
 Faultless—J. J. Ryan & Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Milwaukee—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Moore's—The Peck Bros. & Co., New Haven, Conn.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Pierce—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Rexometer—J. D. Johnson Co., Philadelphia, Pa.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 Street & Kent Mfg. Co., Chicago, Ill.

**COCKS, URN.**

Buffalo—Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.

**COCKS, WATER COOLER.**

American Brass & Iron Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Cataract—Rose Mfg. Co., New York, N. Y.  
 C. & H.—Cordley & Hayes, New York, N. Y.  
 Crampton—Farley Brass Co., Kansas City, Kans.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Douglas Co., The, John, Cincinnati, O.  
 Federal-Huber Co., Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 Landers, Frary & Clark, New Britain, Conn.  
 Loeffelholz Co., Milwaukee, Wis.  
 M. H. Foundry & Mfg. Co., Belleville, Ill.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Paragon—Vulcan Brass Mfg. Co., Cleveland, O.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Peninsular Brass Works, Detroit, Mich.  
 Perkes, Chas., Co., Philadelphia, Pa.  
 Savill Patent—Thomas Savill & Sons, Philadelphia.  
 Standard Brass Works, Detroit, Mich.  
 Wolff Mfg. Co., L., Chicago, Ill.

**COGS, WOOD.**

Bowsher, N. P., Co., The, South Bend, Ind.  
 Estes, E. B., & Sons, New York, N. Y.  
 Fitz Water Wheel Co., Hanover, Pa.  
 Lawson—The Menasha Wood Split Pulley Co.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Thompson Mfg. Co., Lancaster, N. H.  
 Wolf Company, The, Chambersburg, Pa.  
 Woolbert, Chas. W., Elmer, N. J.

**COILS, AMMONIA.**

(See "Bends and Coils, Pipe.")

**COILS (AND BENDS), PIPE.**

(See "Bends and Coils, Pipe.")

**COILS, INDIRECT HEATING.**

Stover Steel Tank Co., Freeport, Ill.

**COILERS, WIRE.**

Garvin Machine Co., New York, N. Y.  
 Horth Perfection—Horth Lathe & Tool Co., Boston.  
 Manville Machine Co., E. J., Waterbury, Conn.  
 Morgan Construction Co., Worcester, Mass.  
 Universal—Sleeper & Hartley, Inc., Worcester, Mass.  
 Wells, Frank L., Co., Kenosha, Wis.

**COLLARS, BASIN AND BATH PLUG.**

Horner—S. E. Horner Co., Bridgeton, N. J.  
 Waterbury Mfg. Co., Waterbury, Conn.

**COLLARS, PIPE.**

American District Steam Co., North Tonawanda, N. Y.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass.

**COLLARS, RELIEF, SAW.**

Armstrong Mfg. Co., Portland, Ore.

**COLLARS, SHAFT.**

(See also Machinery Power Transmission.)

- American Tool & Machine Co.**, Boston, Mass.  
**Bailey—Burruss Mfg. Co.**, Atlanta, Ga.  
**Barnard & Leas Mfg. Co.**, Moline, Ill.  
**Barry—Barry Co.**, Muscatine, Ia.  
**Biles & Laughlin, Inc.**, Harvey, Ill.  
**Bond Foundry & Machine Co.**, Manheim, Pa.  
**Bull Dog—Safety First Mfg. Co.**, Alexandria, Va.  
**Chicago Pulley & Shafting Co.**, Chicago, Ill.  
**Constant, B. S., Mfg. Co.**, The, Bloomington, Ill.  
**Dodge Sales & Engineering Co.**, Mishawaka, Ind.  
**Eastwood Co.**, Benjamin, Paterson, N. J.  
**Estes, E. B. & Sons**, New York, N. Y.  
**Fritz Foundry & Machine Co.**, Geo. J., St. Louis, Mo.  
**Giant Solid—Shaw Coupling Co.**, Syracuse, N. Y.  
**Golden's Foundry & Machine Co.**, Columbus, Ga.  
**Great Western Mfg. Co.**, Leavenworth, Kan.  
**Hallowell—Standard Pressed Steel Co.**, Philadelphia, Pa.  
**Hanson Clutch & Machinery Co.**, Tiffin, O.  
**Hill Clutch Co.**, Cleveland, O.  
**Hodson, G. A.**, Philadelphia, Pa.  
**Holscrew—Bond Foundry & Machine Co.**, Manheim, Pa.  
**Johnson Splits—Shaw Coupling Co.**, Syracuse, N. Y.  
**Link-Belt Company**, Chicago and Philadelphia.  
**Medart Patent Pulley Co.**, St. Louis, Mo.  
**Miami, Middletown, Woodpecker (safety set) The**  
**Middletown Machine Co.**, Middletown, O.  
**Minster Machine Co.**, The, Minster, Ohio. (Safety set).  
**National Foundry, Mfg. & Supply Co.**, Williamsport, Pa.  
**Naylor Bros.**, Peekskill, N. Y.  
**Nordyke & Marmon Co.**, Indianapolis, Ind.  
**Oneida Solid—Shaw Coupling Co.**, Syracuse, N. Y.  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Positive—Positive Clutch & Pulley Works**, Buffalo, N. Y.  
**Pyott, Geo. W., Co.**, The, Chicago, Ill.  
**Rex—Chain Belt Co.**, Milwaukee, Wis.  
**Royersford Foundry & Machine Co.**, Philadelphia, Pa.  
**Safety First Mfg. Co.**, Alexandria, Va.  
**Salem Foundry & Machine Works**, Salem, Va.  
**Shartles—The Middletown Machine Co.**, Middletown, Ohio.  
**Shaw—Shaw Coupling Co.**, Syracuse, N. Y.  
**Sprout, Waldron & Co.**, Muncy, Pa.  
**Standard Pulley Co.**, The, Cincinnati, O.  
**Valley Iron Works**, Williamsport, Pa.  
**Webster Mfg. Co.**, Chicago, Ill.  
**Welch, T. F., & Co.**, Boston, Mass.  
**Wheland—Wheland Co.**, Chattanooga, Tenn.  
**Williams & Co.**, J. H., Brooklyn, N. Y.  
**Wolf Co.**, The, Chambersburg, Pa.  
**Wood's Sons Co.**, T. B., Chambersburg, Pa.

**COLLARS, SHINGLE SAW.****Southern Saw Works**, Atlanta, Ga.**COLLARS (OR COUPLINGS), SINK.**

- American Foundry & Mfg. Co.**, St. Louis, Mo.  
**American Pin Co.**, Waterbury, Conn.  
**Essex Foundry**, Newark, N. J.  
**Garrison Brass & Machine Wks.**, New York, N. Y.  
**Hajoca—Haines, Jones & Cadbury Co.**, Philadelphia.  
**Handy—Phillips Mfg. Co.**, New York, N. Y.  
**MacDonald, A. E.**, Worcester, Mass.  
**McDonald Mfg. Co.**, A. Y., Dubuque, Ia.  
**Mott Iron Works**, The J. L., Trenton, N. J.  
**Richmond Fdy. & Mfg. Co.**, Richmond, Va.  
**Sanitary Company of America**, Linfield, Pa.  
**United Brass Mfg. Co.**, Cleveland, O.  
**Zurn Mfg. Co.**, Erie, Pa.

**COLLARS, SPACING, FOR MILLING CUTTERS.****Wear Ever—Scully-Jones & Co.**, Chicago, Ill.**COLLECTORS, EXHAUSTERS (OR BLOWER SYSTEMS), FOR SHAVINGS, DUST, ETC.**

- A. B. C.—American Blower Co.**, Detroit, Mich.  
**Allington & Curtis Mfg. Co.**, Saginaw, Mich.  
**Banister, A. W., Co.**, South Boston, Mass.  
**Bayley Mfg. Co.**, Milwaukee, Wis.  
**Bl-Cal-ky—Hersh & Bro.**, Allentown, Pa.  
**Buffalo Forge Co.**, Buffalo, N. Y.  
**Clark Dust Collecting Co.**, Chicago, Ill.  
**Cleveland Blow Pipe & Mfg. Co.**, Cleveland, O.  
**Constant, B. S., Mfg. Co.**, The, Bloomington, Ill.  
**Cyclone—Cyclone Blow Pipe Co.**, Chicago, Ill.  
**Diener, Geo. W., Mfg. Co.**, Chicago, Ill.  
**Dixie Mfg. Co.**, Baltimore, Md.  
**Grand Rapids Blow Pipe & Dust Arrester Co.**, Grand Rapids, Mich.  
**Hald, Emil, Blow Pipe Works**, Brooklyn, N. Y.  
**Heat-Rite—John E. Mannen Co.**, Cleveland, O.  
**Hartford—The Hartford Blower Co.**, Hartford, Conn.  
**Ilg Electric Ventilating Co.**, Chicago, Ill.  
**Invincible Blow Pipe Co.**, The, Chicago, Ill.  
**Lee—Thomas Lee & Son Co.**, Cincinnati, O.  
**Marvel—Electric Blower Co.**, Boston, Mass.  
**Massachusetts Blower Co.**, Watertown, Mass.

- Morse Rarefield—The Knickerbocker Co.**, Jackson, Mich.  
**National Blow Pipe & Mfg. Co., Ltd.**, New Orleans, La.  
**New Cyclone—The Knickerbocker Co.**, Jackson, Mich.  
**New Cyclone—Kirk & Blum Mfg. Co.**, Cincinnati, O.  
**New England Ventilating & Heating Co.**, Providence, R. I.  
**New Haven Sand Blast Co.**, New Haven, Conn.  
**Nordyke & Marmon Co.**, Indianapolis, Ind.  
**Northern Blower Co.**, Cleveland, O.  
**Pangborn Corporation**, Hagerstown, Pa.  
**Paxson, J. W., Co.**, Philadelphia, Pa.  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Root, C. J. Co.**, Bristol, Conn.  
**Simon, Buhler & Baumann, Inc.**, New York.  
**Skinner Bros. Mfg. Co.**, St. Louis, Mo.  
**Smith, F. L. & Co.**, New York.  
**Star—Star Forge Co.**, Buffalo, N. Y.  
**Sterling—Sterling Blower Co.**, Hartford, Conn.  
**Stroud, E. H., & Co.**, Chicago, Ill.  
**Sturtevant—B. F. Sturtevant Co.**, Hyde Park, Mass.  
**Swartwout—Ohio Blower & Blower Co.**, The, Cleveland, O.  
**U. S. Blow Pipe & Dust Collecting Co.**, Chicago, Ill.  
**Wings—L. J. Wing Mfg. Co.**, New York, N. Y.  
**Wolf Co.**, The Chambersburg, Pa.

**COLLECTORS, GAS.**

- Hays—The Jos. W. Hays Corp.**, Michigan City, Ind.  
**Hays—Vulcan Fuel Economy Co.**, Chicago, Ill.

**COLLETS, FOR HOLDING DIES, DRILLS, ETC.**

- A. C.—The Adjustable Collet Co.**, Cleveland, O. (for lathes).  
**Cleveland Twist Drill Co.**, Cleveland, O.  
**Magie—Modern Tool Co.**, Erie, Pa.  
**Rivett Lathe & Grinder Co.**, Boston, Mass.  
**Whitney—Whitney Mfg. Co.**, Hartford, Conn.  
**Wizard—McCrosky Tool Corp.**, Meadville, Pa.

**COLUMNS, CAST IRON.****Clow, James B. & Sons**, Chicago, Ill.**COLUMNS, LUBRICATOR.****Musgrave—Star Brass Mfg. Co.**, Boston, Mass.**COLUMNS, MERCURY.**

- Always Reliable—Otto Bernz**, Newark, N. J.  
**Bernz, Otto**, Newark, N. J.  
**Feather—N. B. Feather**, Newark, N. J.  
**Garrison Brass & Machine Works**, New York, N. Y.  
**Keystone—Yonts, C. H., Co.**, The, Meadville, Pa.  
**Shield Brand—M. Glauber & Co.**, New York.

**COLUMNS, WATER.**

(See also "Gages, Water Column.")

- American Foundry & Mfg. Co.**, St. Louis, Mo.  
**American—American Steam Gauge & Valve Mfg. Co.**, Boston, Mass.  
**American Valve & Meter Co.**, Cincinnati, Ohio.  
**Ashcroft—The Ashcroft Mfg. Co.**, New York, N. Y.  
**Ashton—The Ashton Valve Co.**, Boston, Mass.  
**Bordo—L. J. Bordo Co.**, Philadelphia, Pa.  
**Casey-Hedges Co.**, The, Chattanooga, Tenn.  
**Combo—Combo Engineering Co., Inc.**, Union Springs, N. Y.  
**Edward—Edward Valve & Mfg. Co.**, East Chicago, Ind.  
**Fancy, Special, Philadelphia—Nason Mfg. Co.**, New York, N. Y.  
**Garrett & Co.**, W. T., San Francisco, Cal.  
**Glenn Mfg. Co.**, St. Charles, Ill.  
**Jarvis—The Jarvis Engine & Machine Works**, Lansing, Mich.  
**Jerguson—Jerguson Gage & Valve Co.**, Somerville, Mass.  
**Kalamazoo Railway Supply Co.**, Kalamazoo, Mich.  
**Kaltenhaler, H. J.**, Philadelphia, Pa.  
**Kelly & Jones Co.**, The, Greensburg, Pa.  
**Kieley—Kieley & Mueller**, New York, N. Y.  
**Kitts Mfg. Co.**, Oswego, N. Y.  
**Lunkenheimer Co.**, The, Cincinnati, O.  
**Peerless—Peerless Mfg. Co.**, Chester, Pa.  
**Pittsburgh Valve & Fittings Co.**, Barborton, O.  
**Poage—American Valve & Meter Co.**, Cincinnati, O.  
**Powell Co., The Wm.**, Cincinnati, O.  
**Queen City Brass & Iron Works**, Cincinnati, O.  
**Reliance Gauge Column Co.**, Cleveland, O.  
**Reliance—The Paul B. Huyette Co.**, Philadelphia, Pa.  
**Rutizer Co., E.**, New York, N. Y.  
**Sherwood Mfg. Co.**, Buffalo, N. Y.  
**Shield Brand—M. Glauber Co.**, New York, N. Y.  
**Star—Star Brass Mfg. Co.**, Boston, Mass.  
**U. S. Mansfield—U. S. Wind Engine & Pump Co.**, Batavia, Ill. (railroad).  
**Vigilant—The Lunkenheimer Co.**, Cincinnati, O.  
**Williams, Co.**, The, Pittsburgh, Pa.  
**Wright—Wright Improved—Wright-Austin Co.**, Detroit, Mich.

**COLUMNS, WATER, SAFETY.**

- Anderson, V. D., Co., Cleveland, O.  
 Eclipse—Illinois Engineering Co.  
 Garrett, W. D., & Co., New York, N. Y.  
 Gurley—W. & L. E. Gurley, Troy, N. Y.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 McDonough Automatic Regulator Co., Detroit, Mich.  
 Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Plouff—The Plouff Company, Boston, Mass.  
 Reliance—The Paul B. Huyette Co., Inc., Philadelphia, Pa.  
 ♦ Reliance—The Reliance Gauge Column Co., Cleveland, O.  
 Roberts Steam Specialty Co., Cleveland, O.  
 Safety First—Engineering Co. of Philadelphia, Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williams Co., The, Pittsburgh, Pa.  
 Wright—Wright Mfg. Co., Detroit, Mich.  
 Wright-Austin—Wright-Austin Co., Detroit, Mich.

**COMBUSTION CONTROL SYSTEMS.**

Automatic Combustion Control Co., Philadelphia, Pa.

**COMPASSES, CARPENTERS AND MACHINISTS.**

- Athol Machine Co., Athol, Mass.  
 Bemis & Call Hardware & Tool Co., Springfield, Mass.  
 Bernz, Otto Co., Newark, N. J.  
 Johnson, Wm., Newark, N. J.  
 Lowentraut, P. Mfg. Co., Newark, N. J.  
 Peck, Stow & Wilcox Co., Southington, Conn.  
 Sargent & Co., New Haven, Conn.  
 Starrett, L. S. Co., Athol, Mass.  
 Tower & Lyon Co., New York, N. Y.  
 White, L. & I. J. Co., Buffalo, N. Y.

**COMPASSES, MARINERS'.**

Hand, John F., & Sons Co., Philadelphia, Pa.

**COMPASSES, SURVEYING**

(See also, Instruments, Surveying)

Davis—Davis Instrument Mfg. Co., Inc., Baltimore, Md.

**COMPOUND, ANTI-FREEZING FOR FIRE BUCKETS.**

Freeze-No-More—Corliss Supply Co., St. Louis, Mo.

**COMPOUND, ANTI-HEAT, FOR HOT JOURNALS.**

The Ensign Refining Co., Cleveland, O.  
 Whiz—R. M. Hollingshead Co., Camden, N. J.

**COMPOUNDS, BOILER.**

- Acme—Warren & Bailey Mfg. Co., Los Angeles, Cal.  
 Aetna—Aetna Boiler Compound Co., Chicago.  
 Algor Boiler Syrup—Curry Bros. Oil Co., Boston, Mass.  
 Allan, A. C. Co., Chicago, Ill.  
 American Boiler-Life—American Boiler-Life Co., Boston, Mass.  
 Amolico—American Oil Corp., Jackson, Mich.  
 Apexior Carboncoat—Dampney Co. of America, Boston, Mass.  
 Arlington—Arlington Mfg. Co., The, Canton, O.  
 Arr-An-See—ARR-AN-SEE Mfg. Co., St. Louis, Mo.  
 Arrow—Arrow Boiler Compound Co., St. Louis, Mo.  
 Artesian—Adkins, Young & Allen Co., Chicago, Ill.  
 Atlantic Boiler Compound Extract Co., Long Island City, N. Y.  
 Banner—Cortland Specialty Co., Cortland, N. Y.  
 Best Boiler Compound Co., Cincinnati, O.  
 Bird-Archer—The Bird-Archer Co., New York, N. Y.  
 Black-Bear—The Black Bear Co., Long Island City, N. Y.  
 Black Jap—Columbia Graphite Co., Cleveland, O.  
 Bollerline—Straus Bollerline Co., New York.  
 Boller-Kote—Boller-Kote Co., The, Chicago, Ill.  
 Buffalo—Buffalo Belting Co., Buffalo, N. Y.  
 Cleno—J. L. Quimby Co., New York.  
 Climax—J. A. Zibell Co., New York, N. Y.  
 Cooperline—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
 Corliss Water Purifier—Corliss Supply Co., St. Louis, Mo.  
 Crane's—James W. Crane Co., Inc., Brooklyn, N. Y.  
 Dehn's—Compound Injector & Specialty Co., Chicago, Ill.  
 Dixon's Graphite—Jos. Dixon Crucible Co., Jersey City, N. J.  
 Economy—Economy Lubricating Co., Boston, Mass.  
 Economy—Economy Scale Remover Co., Chicago Heights, Ill.  
 Economy Oil Co., Chicago, Ill.  
 Electro—The Henry Johnson Co., Jersey City, N. J.  
 Ensign Refining Co., The, Cleveland, Ohio.  
 ♦ Eureka—Dodge Mfg. Co., Mishawaka, Ind.  
 Famous—Northrop Lubricating Oil Co., St. Louis, Mo.  
 F. F. F.—Paige & Jones Chemical Co., New York, N. Y.  
 Fluoride—D. D. Williamson & Co., New York, N. Y.

**"IDEAL"****Boiler Scale Eradicator**

is a vegetable preparation, positively guaranteed to remove and prevent scale and to stop pitting and corrosion in any type of steam boiler, using any kind of water. A trial convinces. Its record of "no failures" has earned it the name "IDEAL."

**IDEAL CHEMICAL CO., Inc.** 20 S. Senate Ave.  
 Indianapolis, Ind.

Globe Boiler Compound Co., Binghamton, N. Y.  
 Great Lakes—Great Lakes Chemical Works, Appleton, Wis.

Great Western Oil Co., Cleveland, O.  
 H. G.—The Jas. B. Hunt Mfg. Co., Trenton, N. J.  
 Harris—A. W. Harris Oil Co., Providence, R. I.  
 Hayner's—Hayner, Norman Co., Rochester, N. Y.  
 Ideal—Ideal Chemical Co., Indianapolis, Ind.  
 Illinois—Illinois Boiler Cleaning Compound Co., Chicago, Ill.

Imperial Boiler Coating—Crown Mfg. Co., Cleveland, International—International Boiler Compound Co., Chicago, Ill.

Ironsides—The Ironsides Co., Columbus, O.  
 I. X. L.—W. J. Kramer Oil Co., Milwaukee, Wis.  
 Keystone Chemical Mfg. Co., Philadelphia, Pa.  
 Kompost Bricks—Compound Injector & Specialty Co., Chicago, Ill.

L. C. M. S.—The Garland Co., Cleveland, O.  
 Lord's—Engineering Supply Co., Philadelphia, Pa.  
 Lubriko Co., The, Philadelphia, Pa.  
 Lux—Lux, L. A. Co., The, Cleveland, O.  
 Matchless—Albion Mfg. Co., Seattle, Wash.  
 McVicker—Wm. B. McVicker Co., Brooklyn, N. Y.  
 Metalene—Metalene Chemical Co., The, Cleveland, O.  
 Metlskin—Metlskin Co., Inc., Rochester, N. Y.  
 Modoc—The Modoc Co., Inc., Fernwood, Pa.  
 Moore Oil Refining Co., The, Cincinnati, O.  
 Mohawk Refining Co., Cleveland, O.  
 Mueller's—Mueller's Boiler Compound Co., Minneapolis, Minn.

National—National Boiler Specialties Co., Elgin, Ill.  
 Navy—Oleum Products Co., Scranton, Pa.  
 New Era Mfg. Co., The, Kalamazoo, Mich.  
 Old Dan—Lang Chemical Co., Detroit, Mich.  
 O.K.—Chas. Nuhring & Bro., Chicago, Ill.  
 Ozark Mfg. Co., Cleveland, O.  
 Peandeco—Plant Engineering & Equipment Co., New York, N. Y.

Peerless—Lynch-Clarisey Co., Chicago, Ill.  
 Perolin—Perolin Co. of America, Chicago, Ill.  
 Powhatan Brass & Iron Works, Charlestown, W. Va.  
 Protecto—Standard Chemical Co., Kalamazoo, Mich.  
 Pyramid—The Binghamton Boiler Compound Co., Binghamton, N. Y.

Pyramid—Wm. R. Royce, New York, N. Y.  
 Quickure—The Thomas Company, Philadelphia, Pa.  
 Red Seal—The Cherry Chemical Co., Philadelphia, Pa.  
 Red Star—The Thompson, Hayes Co., Cleveland, O.  
 Russell—Russell-Kinkaid Co., Chicago, Ill.  
 Seale & Sons Co., Wm. B., Pittsburgh, Pa.  
 SESCO—Sterling Equipment & Sup. Co., Philadelphia.  
 Shawmut—Shawmut Chemical Co., Boston, Mass.  
 Skalax Resolvent—K. E. K. Mfg. Co., Inc., Syracuse, N. Y.

Snelling—Frost Paint & Oil Co., Minneapolis, Minn.  
 Solvol—Duryea Mfg. Co., Bayonne, N. J.  
 Sonneborn Sons, Inc., L., New York, N. Y.  
 State Mfg. Co., Cleveland, O.  
 Stephenson—Stephenson Mfg. Co., Albany, N. Y.  
 Stuart's—D. A. Stuart & Co., Chicago, Ill.  
 Sumac—The Johnson Compound & Supply Co., Rochester, N. Y.

Superflake—Superior Flake Graphite Co., Chicago, Ill.  
 Superior—Doermann-Roehrer Co., Cincinnati, O.  
 Tegufilm—K. E. K. Mfg. Co., Inc., Syracuse, N. Y.  
 Tegufilm—Tegufilm Chemical Mfg. Co., Inc., Syracuse, N. Y.

Thomson, J. M., & Co., Inc., New York.  
 True Blue American—Economy Lubricating Co., Boston, Mass.

♦ U. S. G. Co.'s—United States Graphite Co., Saginaw, Mich.

Vanduzen Co., The F. W., Cincinnati, O.  
 Vulcanite—United States Boiler Compound Co., Chicago, Ill.

Western Boiler Compound & Chemical Co., Kansas City, Mo.

World's Choice—Wm. Maurer & Co., South Bend, Ind.  
 World Refining Co., The, Easton, Pa.  
 Young's Boiler Compound Co., Catasauqua, Pa.  
 Zibell, J. A., Co., New York, N. Y.

**COMPOUND, BOILER SEALING**

Boile Rite—Kemoshyne Products, Inc., New York, N. Y.  
 Shur-Tite Mfg. Co., Cleveland, O.

**COMPOUNDS AND PASTE, BRAZING.**

Allen—L. B. Allen Co., Inc., Chicago, Ill. (steel and iron).  
 Banner—Cortland Specialty Co., Cortland, N. Y.  
 Brasiron—A. & J. Mfg. Co., The, Chicago, Ill. (for cast iron).  
 Crescent—Anti-Borax Compound Co., Fort Wayne, Ind.  
 E-Z—Anti-Borax Compound Co., Fort Wayne, Ind.  
 Fluxine—Krembs & Co., Chicago, Ill.  
 Laffitte Brazing Plates, Unifonte—The Phillips-Laffitte Company, Philadelphia, Pa.  
 Phillips & Sons, F. R., Philadelphia, Pa.  
 Standard Mfg. Co., Chicago, Ill.  
 Stickerino—Armstrong Mfg. Co., Portland, Ore.  
 Superior—Standard Mfg. Co., Chicago, Ill.  
 Universal Fluxine Co., Urbana, O.

**COMPOUNDS, BUFFING & POLISHING.**

(See "Supplies and Apparatus, Polishers and Platers.")  
 Clover Mfg. Co., Norwalk, Conn.  
 Day, S. A., Mfg. Co., The, Buffalo, N. Y.

**COMPOUNDS, CASE HARDENING.**

American Compound Co., Boston, Mass.  
 Caseite—Bell & Gossett Co., Chicago, Ill.  
 Hetzy—Bennett Metal Treating Co., Elmwood, Conn.  
 Houghton & Co., E. F., Philadelphia, Pa.  
 Ideal—Ideal Case Hardening Compound Co., New York.  
 Kasenit—Kasenit Co., New York, N. Y.  
 Lister's Agricultural Chemical Works, Newark, N. J.

**COMPOUNDS, COMMUTATOR.**

Albion—Albion Mfg. Co., Seattle, Wash.  
 Allen, L. B., Co., Inc., Chicago, Ill.  
 Allerton's—Warren Lubricating Co., Buffalo, N. Y.  
 Crown—Crown Woven Wire Brush Co., Salem, Mass.  
 Ohio—The Ohio Grease Lubricant Co., Loudonville, O.  
 Sparkno—The Sparkno Co., Milwaukee, Wis.

**COMPOUNDS AND OILS, CORE.**

Acme—The Acme Refining Co., Cleveland, O.  
 Buckeye Products Co., The, Cincinnati, Ohio.  
 Climax—Phoenix Oil Co., Cleveland, O.  
 Corol—Corol Co., Chicago, Ill.  
 Cotton & Co., Buffalo, N. Y.  
 Ebony—Hill & Griffith Co., Cincinnati, O.  
 Federal Foundry Supply Co., The, Cleveland, O.  
 Garnet Co., The, Allentown, Pa.  
 Girard Chemical Co., Buffalo, N. Y.  
 Gold Bond—Spencer Kellogg & Sons, Inc., Buffalo, N. Y.  
 Great Western Oil Co., The, Cleveland, O.  
 Koreka—Smith Facing & Supply Co., Cleveland, O.  
 Linoli—The Werner G. Smith Co., Cleveland, O.  
 McCormick, J. S. Co., Pittsburgh, Pa.  
 Mohtan—Marden, Orth & Hastings Corp., New York, N. Y.  
 Rolinco—Bayerson Oil Works, Erie, Pa.  
 Sero Specialty Co., Cleveland, O.  
 Swan & Finch Co., New York. Trade names—Acme, Bison, Century, Corul, Victory.

**COMPOUNDS, CUTTING, DRILLING, THREADING, MILLING, METAL DRAWING, ETC.**

(See also "Oils, Screw Cutting.")

Accrus Meritus—International Lubricants Co., Ltd., Evanston, Ill.  
 Acmesol—The Acme Refining Co., Cleveland, O.  
 Ajax, Keeps Kool—Phoenix Oil Co., The, Cleveland, O.  
 American—American Oil Corp., Jackson, Mich.  
 Appolard—The Acme Refining Co., Cleveland, O.  
 Aquadag, Oildag—Acheson Oildag Co., Port Huron, Mich.  
 Aqualine—Crescent Oil Co., New York, N. Y.  
 Baum's Castorine Co., Rome, N. Y.  
 Blue Seal—Blue Seal Chemical Co., Roselle, N. J.  
 Challenge—Magie Bros., Chicago, Ill.  
 Corliss—Corliss Supply Co., St. Louis, Mo.  
 Cut-Rite—Phoenix Oil Co., The, Cleveland, O.  
 Damascus—Damascus Mfg. Co., Cleveland, O.  
 Dascolene, Dasco Soluble, Kleen Kut Soluble, Super Kool Base, X-Celene—D. A. Stuart Co., Chicago, Ill.  
 Economy—White & Bagley Co., The, Worcester, Mass.  
 Houghtolard, Solcut—E. F. Houghton & Co., Philadelphia, Pa.  
 Illinco Mfg. & Sup. Co., Chicago, Ill.  
 Lube-Well, Lubro-Kool, Near-a-Lard, Frigidol, Lube-a-Tube TDC, Vastolein, Grind-Well, Lubric Hydraulic—G. Whitfield Richards, Philadelphia, Pa.  
 Minolard—White & Bagley Co., Worcester, Mass.  
 Mystic Alpha—Swan & Finch Co., New York.  
 Olproco—Oleum Products Co., Scranton, Pa.  
 Oakite—Oakley Chemical Co., New York, N. Y.  
 Palubco—Pennsylvania Lubricating Co., Pittsburgh, Pa.  
 Paramus—International Lubricant Co., Ltd., Evanston, Ill.

Peerless—Racine Tool & Machine Co., Racine, Wis.  
 Pennzoli Lubro—Oil City Oil & Grease Co., Oil City, Pa.  
 Sun Company, Philadelphia, Pa.  
 Swan & Finch Co., New York. Trade names—Alpha, Bison, Catac, Drawine, Efficiency, Kiakret, Larcul, Mystic, Perfection, Viscosity.  
 Union—Buffalo Oil & Compound Works, Buffalo, N. Y.  
 Warley's—Thomas O. Warley & Co., Philadelphia, Pa.  
 Waverly—Waverly Oil Works Co., Pittsburgh, Pa.  
 World Refining Co., The, Easton, Pa.

**COMPOUNDS, LAPPING.**

Clover Mfg. Co., Norwalk, Conn.

**COMPOUND, HYDRAULIC ELEVATOR.**

Accrus—International Lubricants Co., Ltd., Evanston, Ill.  
 Economy Oil Co., Chicago, Ill.  
 McVicker—Wm. B. McVicker Co., Brooklyn, N. Y.  
 Warley's—Thomas O. Warley & Co., Philadelphia, Pa.

**COMPOUNDS, PIPE JOINT (SEE "CEMENT, PIPE JOINT")****COMPOUNDS, RADIATOR LEAK AND RADIATOR CLEANING.**

Blue Ribbon—International Metal Polish Co., Indianapolis, Ind.  
 Boile Rite—Kemoshyne Products, Inc., New York, N. Y.  
 Economy—Economy Scale Remover Co., Chicago Heights, Ill.  
 Se-ment-ol—Northwestern Chemical Co., Marietta, O.  
 Skalex—Northwestern Chemical Co., Marietta, O.  
 Whiz—R. M. Hollingshead Co., Camden, N. J.  
 Z. Z. Laboratories, New York, N. Y.

**COMPOUNDS, SLUSHING.**

No-Rust—Phoenix Oil Co., Cleveland, Ohio.  
 Rustless Oleite—American Oleite Co., St. Louis, Mo.  
 Warren Chemical Div., The Barrett Co., New York.  
 Warrens—Warren Bros. Co., Boston, Mass.

**COMPOUNDS, TEMPERING.**

Laffitte Tempering Powder—The Phillips-Laffitte Company, Philadelphia, Pa.  
 Tempertough—Weldarline Mfg. Co., Topeka, Kan.

**COMPOUNDS, VALVE GRINDING.**

Baum's Castorine Co., Rome, N. Y.  
 Carborundum Co., The, Niagara Falls, N. Y.  
 Clover Mfg. Co., Norwalk, Conn.  
 Economy—White & Bagley Co., The, Worcester, Mass.  
 General Abrasive Co., Niagara Falls, N. Y.  
 Norwesco—Northwestern Chemical Co., Marietta, O.  
 Oakite—Oakley Chemical Co., New York, N. Y.  
 Trojan—H. G. Hammett, Troy, N. Y.

**COMPOUNDS, WATERPROOFING.**

Anti-Aqua—Detroit Graphite Co., Detroit, Mich.  
 Aquanon—Warren Chemical Div., The Barrett Co., New York, N. Y.  
 Expanded Metal Engineering Co., New York, N. Y.  
 Genasco—The Barber Asphalt Paving Co., Philadelphia, Pa.  
 Texacoat—The Texas Company, New York, N. Y.

**COMPOUNDS, WATER SOFTENING.**

(See "Compounds, Boiler.")

**COMPOUND OR FLUX, WELDING.**

Admiral—Admiral Welding Machine Co., Kansas City, Mo.  
 Anti-Borax—Anti-Borax Compound Co., Ft. Wayne, Ind.  
 Banner—Cortland Specialty Co., Cortland, N. Y.  
 Cherry Heat, Climax, Borax-ette, Vulcan—Cortland Welding Compound Co., Cortland, N. Y.  
 Easyflow, Metalcast, Ruby, Universal—Torchweld Equipment Co., Chicago, Ill.  
 E-Z Crescent—Anti-Borax Compound Co., Ft. Wayne, Ind.  
 Fluxine—Krembs & Company, Chicago, Ill.  
 Fluxore—Weldum Products Co., Indianapolis, Ind.  
 Laffitte Plates and Powder—The Phillips-Laffitte Company, Philadelphia, Pa.  
 Tip-It—Tip-It, Inc., New York.  
 Weld-A-Cast—Cortland Specialty Co., Cortland, N. Y.  
 Weldarline—Weldarline Mfg. Co., Topeka, Kan.

**COMPRESSES, COTTON.**

Reading Iron Co., Reading, Pa.

**COMPRESSORS, AIR AND GAS.**

Acme—Acme Mfg. Co., Bradford, Pa.  
 Acme—Acme Ventilator Corp., Boston, Mass.  
 Advance—Advance Pump & Compressor Co., Battle Creek, Mich.



A. F. S. Machine Co., Toledo, O. (portable).  
 Allen Machine Co., Erie, Pa.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 ♦ American, Marsh—American Steam Pump Co., Battle Creek, Mich.  
 American Fairhurst—American Air Compressor Works, Brooklyn, N. Y.  
 Anti-Borax Compound Co., The, Fort Wayne, Ind.  
 Arctic Ice Machine Co., Canton, O.  
 Au-to—The Auto Compressor Co., Wilmington, O.  
 Baker Rotary—Baker-Hansen Mfg. Co., Oakland, Cal.  
 Barr "Unit-Compound"—Pennsylvania Pneumatic Co., Erie, Pa.  
 Beach-Russ—Beach-Russ Co., New York, N. Y.  
 Bessemer—Bessemer Gas Engine Co., Grove City, Pa.  
 Bink—Star Brass Works, Chicago, Ill.  
 Birmingham Machine & Foundry Co., Birmingham, Ala.  
 Black & Decker Mfg. Co., Baltimore, Md.  
 Blakeslee—Blakeslee Mfg. Co., DuQuoin, Ill.  
 Brunner—Brunner Mfg. Co., Utica, N. Y.  
 Burnham—Union Steam Pump Co., Battle Creek, Mich.  
 Bury Compressor Co., Erie, Pa.  
 ♦ Canton—Woodard Machine Co., Wooster, O.  
 John H. Carlin Machine Co., Inc., Pittsburgh, Pa.  
 Champion Pneumatic Machinery Co., Chicago, Ill.  
 ♦ Chicago Pneumatic—Chicago Pneumatic Tool Co., New York.  
 Chicago Pump Co., Chicago, Ill.  
 Cincinnati Refrigerating Machinery Co., Cincinnati, Ohio.  
 Clark—Clark Bros. Company, Olean, N. Y.  
 Clark-Cadle-Harmon Corp., Rochester, N. Y.  
 Clothel Co., The, New York, N. Y.  
 Connellsville Mfg. & Mine Sup. Co., Connellsville, Pa.  
 Cooper—The C. & G. Cooper Co., Mt. Vernon, Ohio.  
 Crowell Mfg. Co., Brooklyn, N. Y.  
 Curtis & Co., Mfg. Co., St. Louis, Mo.  
 Curtis Pneumatic Machinery Co., St. Louis, Mo.  
 Davis—Hinckley Machine Works, Hinckley, Ill.  
 De Laval—De Laval Steam Turbine Co., Trenton, N. J.  
 ♦ Deming Co., The, Salem, O.  
 Empire—Bishop & Babcock Co., Cleveland, O.  
 Erwin—Erwin & Co., Chicago, Ill. (electric).  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 ♦ Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.  
 Faultless—American Scale Co., Kansas City, Mo.  
 Filer & Stowell Co., Milwaukee, Wis.  
 F. B.—Furness Bros. Co., Chicago, Ill.  
 ♦ Gardner Governor Co., The, Quincy, Ill.  
 General Compressed Air & Vacuum Machinery Co., St. Louis, Mo.  
 General Electric Co., Schenectady, N. Y.  
 General Fire Extinguisher Co., New York, N. Y.  
 Globe Mfg. Co., Chicago, Ill.  
 Grammes, L. F., Sons, Allentown, Pa. (for air blast on machines).  
 Gray-Blaisdell Co., Bradford, Pa.  
 H-B. Compressor & Pump Co., Chicago, Ill.  
 Hall—Hall Steam Pump Co., Pittsburgh, Pa.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Hooker Steam Pump Works, St. Louis, Mo.  
 Hoovens, Owens, Rentschler Co., Hamilton, O.  
 Hope Engineering & Supply Co., Pittsburgh, Pa.  
 Hope Forge & Machine Co., The, Mt. Vernon, O.  
 Imperial, Ingersoll Rogler—Ingersoll Rand Co., New York, N. Y.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 Jackson Rotary—The Jackson Compressor Co., Denver, Colo.  
 Janette Mfg. Co., Chicago, Ill.  
 Johnson—Johnson Service Co., Milwaukee, Wis.  
 Kewanee Private Utilities Co., Kewanee, Ill.  
 Kotten Machine Co., Jersey City, N. J.  
 Kroeschell Bros. Ice Machine Co., Chicago, Ill.  
 Lammert & Mann Co., Chicago, Ill.  
 Lane & Bodley Co., The, Cincinnati, O.  
 Latta & Martin Pump Co., Hickory, N. C.  
 Little Giant—Orange Machine & Mfg. Co., Orange, N. J.  
 Lucas-Miner Tool & Production Co., Dayton, Ohio.  
 Manistee—Manistee Iron Works Co., Manistee, Mich.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Meata Machine Co., The, Pittsburgh, Pa.  
 Miller—Miller Improved Gas Engine Co., Springfield, Ohio.  
 Milwaukee Air Power Pump Co., Milwaukee, Wis.  
 Myers—Myers Machine Tool Co., Columbia, Pa.  
 Morris Co., I. F., Philadelphia, Pa.  
 Nash—Nash Engineering Co., South Norwalk, Conn. (Hydro).  
 National Brake & Electric Co., Milwaukee, Wis.  
 National Steam Pump Co., The, Upper Sandusky, O.  
 National—National Utilities Corp., Milwaukee, Wis.  
 New York Air Brake Co., The, New York.  
 Nordberg—Nordberg Mfg. Co., Milwaukee, Wis.  
 Norwalk Iron Works Co., The, South Norwalk, Conn.  
 Novo—Novo Engine Co., Lansing, Mich.  
 Patten Bros. Co., The, Marietta, O.  
 Paul—Fort Wayne Engineering & Mfg. Co., Fort Wayne, Ind.  
 Peerless—American Compressor & Pump Co., Baltimore, Md.

Pennsylvania Pump & Compressor Co., Easton, Pa.  
 Pennsylvania—Plant Engineering & Equipment Co., New York, N. Y.  
 Potts Mfg. Co., Mechanicsburg, Pa.  
 Quincy—Quincy Engine Co., Quincy, Pa.  
 Ruemmell-Dawley Mfg. Co., The, St. Louis, Mo.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 St. Louis Steam Engine Co., St. Louis, Mo.  
 Schramm, Chris D., & Son, Inc., Philadelphia, Pa.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Selas Co., The, Philadelphia, Pa.  
 Spencer Turbine Co., Hartford, Conn.  
 Standard—Plant Engineering & Equipment Co., New York.  
 ♦ Sullivan Machinery Co., Chicago, Ill.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Taylor Instrument Co., Rochester, N. Y.  
 Ten Eyck—Ten Eyck Pump Co., Auburn, N. Y.  
 Trimount Rotary Power Co., East Dedham, Mass.  
 Triune—Vac Liquid Equipment Co., Cedar Rapids, Ia.  
 Union Steam Pump Co., Battle Creek, Mich.  
 United States Air Compressor Co., Cleveland, O.  
 United—The U. S. & Cuban Allied Works, Engr. Corp., Bradford, Pa.  
 Universal Lubricator Co., Philadelphia, Pa.  
 Utility Air Unit—Utility Compressor Co., Adrian, Mich.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Warren Machine Products Co., Warren, Pa.  
 Westinghouse Traction Brake Co., Pittsburgh, Pa.  
 Wickes Bros., Saginaw, Mich.  
 Wiegand's—I. H. Johnson, Jr., Co., Inc., Philadelphia.  
 Worthington Pump & Machinery Corp., New York.

## COMPRESSORS, AIR, FOR GARAGES.

A. F. S. Machine Co., Toledo, O.  
 ♦ American—American Steam Pump Co., Battle Creek, Mich.  
 Au-to No. O—Auto Compressor Co., Wilmington, O.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Curtis—Curtis Pneumatic Mach'y Co., St. Louis, Mo.  
 Faultless—Vulcan Mfg. Co., Kansas City, Mo.  
 Gardner—The Gardner Governor Co., Quincy, Ill.  
 Globe—American Pump & Tank Co., New York.  
 Hoosier Co., Goshen, Ind.  
 Lectroflator—Black & Decker Mfg. Co., Baltimore, Md.  
 Longstroke—Motor Starter & Air Pump Co., The, Newark, N. J.  
 Lucas-Miner Tool & Production Co., Dayton, Ohio.  
 Mayo—Mayo-Skinner Mfg. Co., Chicago, Ill.  
 Standard—National Standard Co., Niles, Mich.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

## COMPRESSORS, AIR, HYDRAULIC.

Big Wonder—Bishop & Babcock Co., The, Cleveland, O.  
 Champion—The Cleveland Faucet Co., Cleveland, O.  
 Clark Novelty Co., The, Rochester, N. Y.  
 Eureka—Bishop & Babcock Co., Cleveland, O.  
 IXL—The IXL Pump & Mfg. Co., Philadelphia, Pa.  
 Little Wonder—Bishop & Babcock Co., The, Cleveland, Ohio.  
 National Regulator Co., Chicago, Ill.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Strater's—Herman Strater & Sons, Boston, Mass.

## COMPRESSORS, AMMONIA.

(See also "Machinery, Ice-Making and Refrigerating.")

Ball Ice Machine Co., St. Louis, Mo.  
 Carbondale Machine Co., Carbondale, Pa.  
 Cincinnati Refrigerating Machinery Co., Cincinnati, Ohio.  
 Consolidated Mfg. Co., Dayton, O.  
 Lukomski—Lukomski Brothers Co., Detroit, Mich.  
 Marine Iron Works, Chicago, Ill.  
 Montague Iron Works Corp., Chicago, Ill.  
 Triumph Electric Co., Cincinnati, O.  
 Triumph Ice Machine Co., Cincinnati, O.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Wolverine—Huesteman & Cramer Co., Detroit, Mich.  
 Worthington Pump & Machinery Corp., New York, N. Y.

## COMPRESSORS, GASOLINE EXTRACTORS.

Gardner Governor Co., Chicago, Ill.  
 ♦ Sullivan—Sullivan Machinery Co., Chicago, Ill.

## COMPRESSOMETERS.

Foxboro Co., Inc., The, Foxboro, Mass.  
 Pierce, Butler & Pierce Mfg. Corp., Valve & Gage Div., Syracuse, N. Y.

## CONCENTRATORS, AMMONIA.

Gas Machinery Co., Cleveland, Ohio.

## CONCENTRATORS, MAGNETIC.

Magnetic Mfg. Co., Milwaukee, Wis.

**CONDENSERS, ACID, ALKALI AND RUST PROOF.**

Duriron—The Duriron Co., Inc., Dayton, O.

**CONDENSERS, AMMONIA.**

Arctic—Arctic Ice Machine Co., The, Canton, O.  
 Baker Ice Machine Co., Omaha, Neb.  
 Carbondale Machine Co., The, Carbondale, Pa.  
 G-S—The Griscom-Spencer Co., New York, N. Y.  
 Huetteman & Cramer Co., Detroit, Mich.  
 Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Triumph Electric Co., Cincinnati, O.  
 Triumph Ice Machine Co., Cincinnati, O.  
 Vilter—The Vilter Mfg. Co., Milwaukee, Wis.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**CONDENSERS, EVAPORATIVE.**

Griscom-Spencer Co., The, New York, N. Y.

**CONDENSERS, PUMP.**

- ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.
- ♦ McGowan—John H. McGowan Co., The, Cincinnati, O.

**CONDENSERS, STEAM.**

- Admiralty—The Wheeler Condenser & Engineering Co., Carteret, N. J.  
 Alberger—Alberger Pump & Condenser Co., New York, N. Y.  
 Alberger Heater Co., Buffalo, N. Y.  
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 ♦ American-Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Arctic Pownall—Arctic Ice Machine Co., The, Canton, Ohio.  
 Beyer—Ingersoll-Rand Co., New York, N. Y.  
 Blake—Blake Pump & Condenser Co., Fitchburg, Mass.  
 B. M. C.—Butler Mfg. Co., Kansas City, Mo.  
 Buffovak—Buffalo Fdy. & Machine Co., Buffalo, N. Y.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Bulkley—M. W. Kellogg Co., New York.  
 ♦ Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 Connersville—Connersville Blower Co., Connersville, Ind.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Davidson, M. T., Co., New York, N. Y.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Devine Co., J. P., Buffalo, N. Y.  
 Elliott, Ehrhart—Elliott Co., Jeannette, Pa.  
 Garrett, W. D., & Co., New York, N. Y.  
 Helander—The Mesta Machine Co., Pittsburg, Pa.  
 Ingersoll Rand—Ingersoll Rand Co., New York.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, O.  
 Mesta—Mesta Machine Co., Pittsburg, Pa.  
 Morris Co., I. P., Philadelphia, Pa.  
 Nordberg—Nordberg Mfg. Co., Milwaukee, Wis.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Portland Co., The, Portland, Me.  
 Prescott Steam Pump Co., Fred M., New York, N. Y.  
 R. D.—Ruemmel-Dawley Mfg. Co., St. Louis, Mo.  
 Ross—Ross Heater & Mfg. Co., Inc., Buffalo, N. Y.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Standard Multicoil—Standard Water Systems Co., Hampton, N. J.  
 Thompson—Griscom-Spencer Co., New York.  
 Triumph Ice Machine Co., Cincinnati, O.  
 Union Steam Pump Co., Battle Creek, Mich. (Jet and surface.)  
 Vilter—The Vilter Mfg. Co., Milwaukee, Wis.  
 Weiss—Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Westinghouse Leblance—Westinghouse Machine Co., E. Pittsburg, Pa.  
 C. H. Wheeler—C. H. Wheeler Mfg. Co., Philadelphia, Pa.  
 Worthington—Worthington Pump & Machinery Corp., New York.  
 Zeigler—Vertical Condenser Co., Cincinnati, O.

**CONDENSERS, SUB-COOLING.**

G. R.—Griscom-Russell Co., New York, N. Y.

**CONDUITS, ELECTRICAL, FLEXIBLE, METALLIC.**

- Breeze Mfg. Co., Newark, N. J.  
 ♦ Buckeye, Realflex—Youngstown Sheet & Tube Co., Youngstown, Ohio.  
 Columbia Metal Hose Works, New York, N. Y.  
 Eastern Tube & Tool Co., Inc., Brooklyn, N. Y. (steel and non-metallic).  
 Sprague Electric Works of Central Electric Co., New York.  
 ♦ Sterling—Garland Mfg. Co., Pittsburgh, Pa.  
 Wireduct—American Conduit Mfg. Co., New Kensington, Pa.

**CONDUIT, ELECTRIC, RIGID.**

- Central Tube Co., Pittsburgh, Pa.  
 ♦ Galvduct (galvanized)—Garland Mfg. Co., Pittsburgh, Pa.  
 ♦ Loricated (enameled)—Garland Mfg. Co., Pittsburgh, Pa.  
 Sprague Electric Works of Central Electric Co., New York.  
 Steel & Tube Co. of America, Chicago, Ill.  
 ♦ Sterling—Garland Mfg. Co., Pittsburgh, Pa.  
 Western Electric Co., Inc., Chicago, Ill.  
 Wiremold—American Conduit Mfg. Co., New Kensington, Pa.  
 ♦ Youngstown Buckeye—The Youngstown Sheet & Tube Co., Youngstown, O.

**CONDUITS, UNDERGROUND, FIBRE.**

Orangeburg—Fibre Conduit Co., Orangeburg, N. Y.

**CONDUITS, UNDERGROUND, WOOD AND TILE.**

- Bannon, B. Sewer Pipe Co., Louisville, Ky.  
 Johns-Manville, Inc., New York, N. Y.  
 Macomb Sewer Pipe Co., Macomb, Ill.  
 Michigan Pipe Co., The, Bay City, Mich. (wood).  
 Ric-Wil—Richardson-Wilson Pipe Covering Co., Grand Rapids, Mich.  
 The Rodd Co., Pittsburgh, Pa.  
 W. E. D.—Kaybro Co., The, Boston, Mass.  
 Winslow & Co., Inc., Portland, Me.  
 Wyckoff—Wyckoff Pipe & Creosoting Co., Inc., New York, N. Y.

**CONES FOR SYPHON VALVES.**

American Pin Co., Waterbury, Conn.

**CONNECTIONS, BASIN, RUBBER.**

- Canfield Rubber Co., The, Bridgeport, Conn.  
 ♦ Bobbs, Dandy, Ohliger, Robbs—The Mechanical Rubber Co., Cleveland, O.

**CONNECTIONS, BATH COCK.**

Faultless—J. J. Ryan & Co., Chicago, Ill.

**CONNECTIONS, CLOSET, FLOOR.**

- American Brass Novelty Co., Grand Haven, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Buchanan, Jr., A., Brooklyn, N. Y.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Canfield—H. O. Canfield Co., Bridgeport, Conn.  
 Exeter Brass Works, Exeter, N. H.  
 Good Mfg. Co., Inc., New York, N. Y.  
 Helland, Geo. W., New York, N. Y.  
 Ideal (Cast Iron)—Sanitary Company of America, Linfield, Pa.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 McCloskey Water Closet Connection Co., Brooklyn.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Phillips—Garrison Brass & Mach. Works, New York.  
 Queen City—Fries & Co., Buffalo, N. Y.  
 Robb—The B. F. Goodrich Co., Akron, O.  
 Rudolph—Alfred J. Rudolph, Philadelphia (metal to metal).  
 Sanitary Company of America, Linfield, Pa.  
 Sanitary, Perfect—J. L. Mott Iron Works, Trenton, N. J.  
 Savill's Patent—Thomas Savill Sons, Philadelphia.  
 Security—F. W. Webb Mfg. Co., Boston, Mass.  
 Testite—The Groeniger Mfg. Co., Columbus, O.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Watrous Perfection—Federal-Huber Co., Chicago, Ill.  
 Watrous Securo—Federal-Huber Co., Chicago, Ill.  
 Webco—F. W. Webb Mfg. Co., Boston, Mass.

**CONNECTIONS, CORPORATION COCK.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Exeter Brass Works, Exeter, N. H.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.

**CONNECTIONS, GAS METER.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McKee—Eclipse Fuel Engineering Co., Rockford, Ill.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Standard Meter Co., The, Philadelphia, Pa.

**CONNECTIONS, GASOLINE TUBING.**

- ♦ Imperial Brass Mfg. Co., Chicago, Ill.

**CONNECTIONS, ROSE, TO SMOOTH FAUCETS.**

Durst Mfg. Co., The, New York, N. Y.  
 Jones Mfg. Co., Boston, Mass.  
 Penberthy—Penberthy Injector Co., Detroit, Mich.  
 Schlagen Bros. Co., Chicago, Ill.  
 Star Styrum—Wm. Welsh, Cincinnati, O.

**CONNECTIONS, PIPE, OFFSET REDUCING.**

C.—Crane Co., Chicago, Ill.  
 Essex Foundry, Newark, N. J.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

**CONNECTIONS, PIPE LINE.**

Best Mfg. Co., Pittsburg, Pa.  
 Dresser—Dresser Mfg. Co., S. R., Bradford, Pa.  
 Grip—Ware Coupling & Nipple Co., Ware, Mass.  
 Hammon Coupler Co., The, Mount Vernon, O.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 M. I. F. Co.—Malleable Iron Fittings Co., Bradford, Conn.

**CONNECTIONS, PIPE, SLIP JOINT.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Ampino—American Pin Co., Waterbury, Conn.  
 Crawford—Federal-Huber Co., Chicago, Ill.  
 Exeter Brass Works, Exeter, N. H.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hygrade—American Sanitary Mfg. Co., Abingdon, Ill.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 Loyal Brass Co., Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York, N. Y.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Ware Coupling & Nipple Co., Ware, Mass.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.

**CONNECTIONS, RADIATOR VALVE.**

♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Walworth Mfg. Co., Boston, Mass.  
 Yonts, C. H., Co., The, Meadville, Pa.

**CONNECTIONS, ROOF, DRAINAGE.**

Essex Foundry, Newark, N. J.  
 Holt—Barrett Company, The, New York.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.

**CONNECTIONS, RUBBER.**

♦ Bobb—Mechanical Rubber Co., Cleveland, O.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Canfield, H. O., Co., The, Bridgeport, Conn.  
 Dandy—Morgan & Wright, Detroit, Mich.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Goodrich—The B. F. Goodrich Co., Akron, O.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Republic Rubber Co., The, Youngstown, O.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**CONNECTIONS, SEWER, CAST IRON.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Berger Bros. Co., Philadelphia, Pa.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Lutz—W. F. J. Lutz, Chicago, Ill.

**CONNECTIONS, SINK.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., The, Waterbury, Conn.  
 Barber Mfg. Co., The, Ashtabula, O.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Eclipse—Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Essex Foundry, Newark, N. J.  
 Exeter Brass Works, Exeter, N. H.  
 Gray Iron Fdry. Co., Reading, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McCormick Mfg. Co., Dayton, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Modern Iron Works, Quincy, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York, N. Y.  
 N. P.—Elgin Brass Co., Cleveland, O.  
 Richmond Fdy. & Mfg. Co., Richmond, Va.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Sanitary Company of America, Linfield, Pa.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Wise, J. B., Inc., Watertown, N. Y.

Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**CONNECTIONS, STANDPIPE, SIAMENH.**

Allen Fire Department Supply Co., Providence, R. I.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Callahan Co., The, Cornelius, Boston, Mass. (hose).  
 Clift & Gilbert Co., New York, N. Y.  
 Crane—Crane Co., Chicago, Ill.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Fries & Co., Buffalo, N. Y.  
 Hayward & Co., S. F., New York, N. Y.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Jiffy—The Jiffy Fire Hose Rack Co., New York, N. Y.  
 Josico—John Simmons Co., New York, N. Y.  
 Ludlow—Ludlow Valve Mfg. Co., Troy, N. Y.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Metropolitan—Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Seattle Brass Co., Seattle, Wash.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Standard Brass & Iron, Milwaukee, Wis.

**CONNECTIONS, STRAINER, STEAM TRAP.**

Kieley—Kieley & Mueller, New York, N. Y.

**CONNECTIONS, TANK CAR.**

Billow—National Supply Co., Chicago, Ill.

**CONNECTIONS, UNION.**

(See "Unions.")

**CONNECTIONS, URINAL.**

Acheson Mfg. Co., Braddock, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Banner—Banner Mfg. Co., New York, N. Y.  
 Columbus Brass Co., Columbus, O.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Exeter Brass Works, Exeter, N. H.  
 Federal-Huber Co., Chicago, Ill.  
 Haydenville Co., The, Haydenville, Mass.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Whitlock Coil Pipe Co., The, Hartford, Conn.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**CONNECTIONS, WATER BACK.**

Atkinson Co., The, Rochester, N. Y.  
 Briggs, William, Inc., Brooklyn, N. Y.  
 Cahill Mfg. Co., Worcester, Mass.  
 Exeter Brass Works, Exeter, N. H.  
 Flannery, P. J., Co., New Britain, Conn.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hamilton Brass Works, John, Bridgeport, Conn.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Maxwell—Southern Mfg. & Supply Co., Louisville, Ky.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Metal Works, Chelsea, Mass.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Wolff Mfg. Co., Chicago, Ill.

**CONNECTIONS, WATER CLOSET.**

(See also "Connections, Closet, Floor.")

Exeter Brass Works, Exeter, N. H.

**CONNECTIONS, WATER, LEAD FLANGE.**

Alliance Brass Foundry Co., Detroit, Mich.  
 Corcoran—Cleveland Metal Joint Co., The, Cleveland, Ohio.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller, H., Mfg. Co., Decatur, Ill.

**CONNECTIONS, WATER METER.**

Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Modern Iron Works, Quincy, Ill.  
 Teksagon—H. W. Clark Co., Mattoon, Ill.

**CONSUMERS, GAS (FOR POWER BOILERS).**

Furnace Gas Consumer Co., Matteawan, N. Y.

**CONSUMERS OR PREVENTERS, SMOKE.**

American Power Co., New York, N. Y.  
 Climax—Climax Smoke Preventer Co., Inc., Boston, Mass.  
 Hennebelle Co., Chicago, Ill.  
 Robinson—T. J. Robinson Smoke Consumer Co., Chicago, Ill.  
 Royal—Hart & Crouse Co., Utica, N. Y.  
 Sauer Power Generator Co., Pittsburgh, Pa.  
 Smoke Abater Co., Providence, R. I.

**CONTROLLERS, AUTOMATIC COMBUSTION.**

The Engineer Company, New York, N. Y.  
 Eureka—The William D. Luce Co., Haverhill, Mass.

**CONTROLLERS, DRIP TANK.**

(See also "Couplings, Pipe.")

McAlear Mfg. Co., Chicago, Ill.

**CONTROLLERS, ELECTRIC.**

Craig—Millard Co., Detroit, Mich.  
 Eck Dynamo & Motor Co., Belleville, N. J.  
 Electric Controller & Mfg. Co., Cleveland, Ohio.  
 Electric—Sundh Electric Co., Newark, N. J.  
 General Electric Co., The, Schenectady, N. Y.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Leader Iron Works, Decatur, Ill.  
 Morgan Engineering Co., Alliance, O.  
 National—National Utilities Corp., Milwaukee, Wis.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.  
 Reliance Electric & Engineering Co., Cleveland, O.  
 Roberts—Geo. J. Roberts Co., Dayton, O.  
 Sprague Electric Works, New York, N. Y.

**CONTROLLERS, POWER BOILER.**

Kelly Controller Co., Chicago, Ill.

**CONTROLLERS, POWER PUMP.**

(See also Governors Pump).

♦ Mason—Mason Regulator Co., Boston, Mass.

**CONTROLLERS, PRESSURE.**

Federal Gauge Co., Chicago, Ill. (electric)  
 Usaco—United States Air Compressor Co., Cleveland, O.

**CONTROLLERS, RATE OF FLOW.**

Simplex Valve & Meter Co., Philadelphia, Pa.

**CONTROLLERS, SHOWER BATH.**

Powers Regulator Co., Chicago, Ill.

**CONTROLLERS, STEAM AND VACUUM HEATING.**

Kelly Controller Co., Chicago, Ill.

**CONTROLLERS, STOKER.**

McAlear Mfg. Co., The, Chicago, Ill.  
 McDonough—McDonough Coal Saving Corporation, Detroit, Mich.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.

**CONTROLLERS, TANK WATER LEVEL.**

♦ Fisher Governor Co., Inc., The, Marshalltown, Iowa.  
 Garrett, W. D. & Co., New York, N. Y.  
 Hydromatic—The Ohio Body & Blower Co., Cleveland, Ohio.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.

**CONTROLLERS, WATER JET.**

McAlear Mfg. Co., The, Chicago, Ill.

**CONVERTERS.**

Allis-Chalmers Co., Milwaukee, Wis.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 General Electric Co., Schenectady, N. Y.  
 High-Grade—Eck Dynamo & Motor Co., Belleville, N. J.  
 Mohr, John, & Sons, Chicago, Ill.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Petroleum Iron Works Co., The, Sharon, Pa.  
 Power & Mining Machinery Co., New York, N. Y.  
 Tropenas—Tropenas Co., Brooklyn, N. Y.  
 Wagner Electric Mfg. Co., St. Louis, Mo.  
 Western Electric Co., New York.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**CONVEYORS, APRON.**

(See also "Machinery, Elevating and Conveying.")

Amco—Alvey Mfg. Co., St. Louis, Mo.  
 Howe Chain Co., Muskegon, Mich.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Palmer-Bee Co., Detroit, Mich.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 ♦ Weller Mfg. Co., Chicago, Ill.

**CONVEYORS, BAGASSE.**

♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Porcupine Company, The, Bridgeport, Conn.

**CONVEYORS, BELT.**

(See also "Mach'y, Elevating & Conveying.")

Amco—Alvey Mfg. Co., St. Louis, Mo.  
 Atlas Engineering Co., Milwaukee, Wis.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 B-G—Barber-Greene Co., Aurora, Ill.  
 Buchanan—Buchanan, C. G., Co., Inc., New York.  
 Buzz—Buzz Engineering Co., Louisville, Ky.  
 Caldwell, H. W. & Sons, Co., Chicago, Ill.  
 Cambridge Wire Cloth Co., Cambridge, Md.  
 ♦ Chain Belt Co., Milwaukee, Wis.  
 ♦ Congar, Goodyear, Hytemp—Goodyear Tire & Rubber Co., Akron, O.  
 Converse, F. S. Converse Company, Inc., Johnson City, N. Y.  
 Conveying Weigher Co., The, New York, N. Y.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Dominion—Dominion Asbestos and Rubber Corp., New York.  
 Dow Wire & Iron Works, Louisville, Ky.  
 Dull, Raymond W., Co., Chicago, Ill.  
 Farnham Mfg. Co., Buffalo, N. Y.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Haslett Spiral Chute Co., Philadelphia, Pa. (merchandise).  
 Improved Appliance Co., Brooklyn, N. Y.  
 Industrial Supply Co., Keokuk, Ia.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lamson Co., The, Boston.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Nurdyke & Marmon Co., Indianapolis, Ind.  
 Palmer-Bee Co., Detroit, Mich.  
 Pangborn Corp., Hagerstown, Md.  
 Portable Machinery Co., Passaic, N. J.  
 Power & Mining Machinery Co., New York, N. Y.  
 Reliable—Universal Road Machinery Co., Kingston, N. Y.  
 Robins Conveying Belt Co., New York, N. Y.  
 S. A.—Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Scoop Conveyor—Portable Machinery Co., Inc., Passaic, N. J.  
 Smith Engineering Works, Milwaukee, Wis.  
 Specialty Engineering Co., Philadelphia, Pa.  
 Standard Conveyor Co., North St. Paul, Minn.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 ♦ Weller Mfg. Co., Chicago, Ill.

**CONVEYORS, BRICK.**

Barber-Greene Co., Aurora, Ill.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Palmer-Bee Co., Detroit, Mich.

**CONVEYORS, BRIDGE.**

Improved Appliance Co., Brooklyn, N. Y.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 McMyler-Interstate Co., Bedford, O.

**CONVEYORS, COAL AND ASH.**

Barber-Greene Co., Aurora, Ill.  
 Beaumont, R. H., Co., Philadelphia, Pa.  
 Boston Belting Co., Boston, Mass.  
 Brady Steam Jet—James A. Brady Foundry Co., Chicago, Ill.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Combusto—Combustion Engineering Corp., New York.  
 Dureco—National-Standard Co., Niles, Mich.  
 The Ernst—Chas. K. Ernst, Buffalo, N. Y.  
 ♦ Fairbanks-Morse & Co., Chicago, Ill.  
 Ferguson & Lange Foundry Co., Chicago, Ill.  
 Gifford-Wood Co., Hudson, N. Y.  
 Girtanner—Girtanner Engineering Corp., N. Y.  
 Godfrey—The Godfrey Conveyor Co., Elkhart, Ind.  
 Green—Green Engineering Co., East Chicago, Ind. (Steam Jet).  
 Guarantee Construction Co., New York, N. Y.  
 Howe Chain Co., Muskegon, Mich.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lidgetwood Mfg. Co., New York, N. Y.  
 Loudon Machinery Co., Fairfield, Iowa.  
 Mead & Morrison Mfg. Co., East Boston, Mass.  
 Morrow Mfg. Co., Wellston, Ohio.  
 Oliver, Wm. J., Mfg. Co., Knoxville, Tenn.  
 Palmer-Bee Co., Detroit, Mich.  
 Parson—Parson Mfg. Co., New York, N. Y.  
 Peck Carrier—Link-Belt Company, Chicago and Philadelphia.  
 Specialty Engineering Co., Philadelphia, Pa.  
 Stedman's Foundry & Machine Works, Aurora, Ind.  
 Vacuum Ash & Soot Conveyor Co., Newark, N. J.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 ♦ Weller Mfg. Co., Chicago, Ill.  
 ♦ Yale & Towne Mfg. Co., The, New York, N. Y.

**CONVEYORS, CUP, SANITARY.**

Dow Wire & Iron Works, Louisville, Ky.

**CONVEYORS, FLIGHT.**

Link-Belt Company, Chicago and Philadelphia.  
Stephens-Adamson Mfg. Co., Aurora, Ill.

**CONVEYERS, GRAVEL AND SAND.**

Barber-Greene Co., Aurora, Ill.  
Boston Belting Co., Boston, Mass.  
Buzz Engineering Co., Louisville, Ky.  
Howe Chain Co., Muskegon, Mich.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Palmer-Bee Co., Detroit, Mich.  
Stedman's Foundry & Machine Works, Aurora, Ind.  
♦ Webster Mfg. Co., Chicago, Ill.  
Weller Mfg. Co., Chicago, Ill.

**CONVEYERS OR CARRIERS, GRAVITY.**

Amco—Alvey Mfg. Co., St. Louis, Mo.  
Buzz—Buzz Engineering Co., Louisville, Ky.  
Chicago—Chicago Conveyor Co., Chicago, Ill.  
Dow Wire & Iron Works, Louisville, Ky.  
Gifford-Wood Co., Hudson, N. Y.  
Haslett Spiral Chute Co., The, Philadelphia, Pa.  
Lamson Co., Boston, Mass.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Matthews Gravity Carrier Co., Ellwood City, Pa.  
Otis—Otis Elevator Co., New York, N. Y.  
Palmer-Bee Co., Detroit, Mich.  
Standard Conveyor Co., North St. Paul, Minn.  
Stine, S. B., Osceola Mills, Pa.  
Taplin-Rice-Clerkin Co., Akron, O.

**CONVEYORS, MERCHANDISE.**

Barber-Green Co., Aurora, Ill.  
Buzz—Buzz Engineering Co., Louisville, Ky.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Louden Machinery Co., Fairfield, Ia.  
Myers, F. E. & Bros., Ashland, O.  
Palmer-Bee Co., Detroit, Mich.  
Rexall Package Conveyor—Imperial Belting Co., Chicago, Ill.  
Standard Conveyor Co., North St. Paul, Minn.

**CONVEYORS, PNEUMATIC.**

"Airveyor"—Guarantee Construction Co., New York, N. Y.  
Allington & Curtis Mfg., Saginaw, Mich.  
Northern Blower Co., Cleveland, Ohio.  
Pneumatic Conveyor Co., Chicago, Ill.  
Simon, Buhler & Baumann, Inc., New York.  
Standard Spiral Pipe Works, Chicago, Ill.  
Universal Tube Co., Chicago, Ill.

**CONVEYORS, PORTABLE, FOR LOADING CARS, STACKING, ETC.**

(See also "Loaders.")

Alvey Mfg. Co., St. Louis, Mo.  
Barber-Greene Co., Aurora, Ill.  
Clark, W. J., Co., Salem, O.  
Dreadnaught—Seaverns, James B., Chicago, Ill.  
Haiss—Geo. Haiss Mfg. Co., New York, N. Y.  
♦ Jeffrey—The Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Portable Machinery Co., Passiac, N. J.  
Robins Conveying Belt Co., New York, N. Y.  
Specialty Engineering Co., Philadelphia, Pa.  
Stephens-Adamson Mfg. Co., Aurora, Ill.

**CONVEYORS, SAWDUST.**

American—American Saw Mill Machinery Co., Hackensack, N. J.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Cleveland Doodle-bay—Cleveland Machinery & Supply Co., Cleveland, Tenn.  
General Supply & Machine Co., Meridian, Miss.  
Howe Chain Co., Muskegon, Mich.  
♦ Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Raleigh Iron Works Co., Raleigh, N. C.  
Standard Saw Mill Machinery Co., Erie, Pa.  
♦ Webster Mfg. Co., Chicago, Ill.

**CONVEYORS, SCRAPER.**

Howe Chain Co., Muskegon, Mich.  
♦ Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
♦ Webster Mfg. Co., Chicago, Ill.  
Willcox Engineering Co., Saginaw, Mich.

**CONVEYORS, SCREW OR SPIRAL.**

Duriron—Duriron Castings Co., Dayton, O.  
Helicoid—Caldwell & Son Co., H. W., Chicago, Ill.  
Improved Appliance Co., Brooklyn, N. Y.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Palmer-Bee Co., Detroit, Mich.  
Pangborn Corp., Hagerstown, Md.  
Stephens-Adams Mfg. Co., Aurora, Ill.

♦ Webster Mfg. Co., Chicago, Ill.  
Weller Mfg. Co., Chicago, Ill.

**CONVEYORS, SEBET.**

Hollingsworth, Wm., Baltimore, Md.  
Link-Belt Company, Chicago and Philadelphia.

**CONVEYORS, SLAB.**

Banister, A. W., Co., So. Boston, Mass.  
Improved Appliance Co., Brooklyn, N. Y.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Wheland—Wheland Co., Chattanooga, Tenn.

**CONVEYORS, STEEL PAN.**

Link-Belt Company, Chicago and Philadelphia.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**CONVEYORS, WIRE CABLE.**

(See also "Tramways, Aerial.")

Cyclone Red Tag—Cyclone Fence Co., Waukegan, Ill.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
McMyler-Interstate Co., Bedford, O.  
♦ Webster Mfg. Co., Chicago, Ill.

**CONVEYORS, WOOD AND LUMBER.**

♦ Boston Belting Co., Boston, Mass.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Nordyke & Marmon Co., Indianapolis, Ind.  
Palmer-Bee Co., Detroit, Mich.  
Standard Conveyor Co., North St. Paul, Minn.  
♦ Webster Mfg. Co., Chicago, Ill.

**COOKERS, FEED.**

American—American Scale Co., Kansas City, Mo.  
Butler—Butler Co., The, Butler, Ind.  
Columbiana Boiler Co., Columbiana, Ohio.  
Eureka—C. H. Dutton Co., Kalamazoo, Mich.  
Improved Appliance Co., Brooklyn, N. Y.  
Kelly Foundry & Machine Co., Goshen, Ind.  
Treaty Co., The, Greenville, Ohio.  
Wisconsin Foundry & Machine Co., Madison, Wis.

**COOKING APPARATUS, ELECTRIC.**

American Beauty—American Electrical Heater Co., Detroit.  
Armstrong—The Armstrong Mfg. Co., Huntington, W. Va.  
Edison Electric Appliance Co., Inc., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Hughes Electric Heating Co., Chicago, Ill.  
Landers, Frary & Clark, New Britain, Conn.  
Rutenber Electric Co., Marion, Ind.  
Simplex Electric Heating Co., Cambridge, Mass.  
Estate Stove Co., Hamilton, O.  
Western Electric Co., Inc., Chicago, Ill.  
Westinghouse Electric & Mfg. Co., Pittsburg, Pa.  
Woche, Max, & Son Co., Cincinnati, O.

**COOLERS, AFTER, AIR.**

Union—Union Steam Pump Co., Battle Creek, Mich.

**COOLERS, BRINE.**

Carbondale Machine Co., The, Carbondale, Pa.  
Frick Co., Waynesboro, Pa.  
Triumph Electric Co., Cincinnati, O.  
Triumph Ice Machine Co., The, Oakley, Cincinnati, O.

**COOLERS, CHEMICAL AND OIL.**

Alberger Heater Co., Buffalo, N. Y.  
Improved Appliance Co., Brooklyn, N. Y.  
Multiwhirl—Griscom, Russell Co., The, New York.  
R. & D. Paracoll—Rowe & Davis Engineers, Inc., New York.  
Ross—Ross Heater & Mfg. Co., Inc., Buffalo, N. Y.  
S. & K.—Schutte & Koerting Co., Philadelphia, Pa.  
Smidth, F. L. & Co., New York, N. Y.  
Standard Multicoil—Standard Water System Co., Hampton, N. J.  
Triumph Ice Machine Co., Cincinnati, O.  
Wainwright—Alberger Pump & Condenser Co., New York.

**COOLERS, GENERATOR.**

Carrier Air Conditioning Company of America, Buffalo, N. Y.

**COOPING, WALL.**

American Sewer Pipe Company, Akron, O.  
Laclede-Christy Clay Products Co., St. Louis, Mo.  
McNutt, Lewis, Brazil, Ind.  
Monmouth Clay Mfg. Co., Monmouth, Ill.  
Post Pipe Co., Texarkana, Tex.  
San Antonio Sewer Pipe Co., San Antonio, Texas.  
Stevens' Sons Co., H., Macon, Ga.



Winslow & Co., Inc., Portland, Me.

### COPPER, INGOT.

American Smelting & Refining Co., The, New York.  
Atlantic Iron & Metal Co., Cleveland, O.  
Birkenstein, S., & Sons, Inc., Chicago, Ill.  
Brady Brass Co., Jersey City, N. J.  
Breuer, C. R., Smelting & Refining Co., The, Cincinnati, O.  
Cincinnati Metal Refining Co., Cincinnati.  
Columbia Smelting & Refining Co., New York, N. Y.  
Detroit Metal Refining Co., Detroit, Mich.  
Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
Great Western Smelting & Refining Co., Chicago, Ill.  
Illinois Smelting & Refining Co., Chicago, Ill.  
Lehman Bros., Hoboken, N. J.  
Michigan Smelting & Refining Co., Detroit, Mich.  
Nassau Smelting & Refining Co., New York, N. Y.  
North American Copper Co., New York, N. Y.  
North American Smelting Co., Philadelphia, Pa.  
Phelps, Dodge & Co., New York, N. Y.  
Sandoval Zinc Co., Chicago, Ill. (ingot and composition).  
Selby—American Smelters Securities Co., San Francisco, Cal.  
United States Reduction Co., East Chicago, Ind.

### COPPER, PHOSPHOR AND MANGANESE.

Ajax Metal Co., The, Philadelphia, Pa.  
Crescent—Crescent Phosphorized Metal Co., The, Philadelphia.  
Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
Reeves—Paul S. Reeves & Co., Philadelphia, Pa.  
Richards & Co., Inc., Boston, Mass.  
Riverside Metal Co., Riverside, N. J.  
Stanley Process—United American Metals Corp., Brooklyn, N. Y.

### COPPER, RODS, BARS AND SHEETS.

American Brass Co., Waterbury, Conn.  
Benson, H. K. & F. S., Glen Ridge, N. J.  
Billing Brass Co., Waterbury, Conn.  
Bridgeport Brass Co., Bridgeport, Conn.  
Chase Companies, Inc., Waterbury, Conn.  
Clendennin Bros., Inc., Baltimore, Md.  
Cleveland Brass & Copper Mills, Inc., Euclid, O.  
Connecticut Brass Mfg. Corp., Waterbury, Conn.  
Dallas Brass & Copper Co., Chicago, Ill.  
Detroit Copper & Brass Rolling Mills, Detroit, Mich.  
Hussey, C. G., & Co., Pittsburg, Pa.  
Michigan Copper & Brass Co., The, Detroit, Mich.  
New Haven Copper Co., Seymour, Conn.  
New Jersey Tube Co., New York.  
North American Copper Co., New York, N. Y.  
Ohio Brass & Copper Co., The, Cincinnati, O.  
Rome Brass & Copper Co., Rome, N. Y.  
Selby—American Smelters Securities Co., San Francisco, Cal.  
Stamford Rolling Mills Co., New York.  
Star—U. T. Hungerford Brass & Copper Co., New York.  
Taunton-New Bedford Copper Co., Taunton, Mass.  
Wolverine—Michigan Copper & Brass Co., The, Detroit, Mich.

### COPPER SULPHATE.

American Smelting & Refining Co., New York.

### COPPERS AND IRONS, SOLDERING.

Allen—L. B. Allen Co., Inc., Chicago, Ill.  
American Electrical Heater Co., Detroit, Mich. (electric).  
Baco—Baco Electric Co., Bode, Ia.  
Bernz, Otto, Newark, N. J.  
Block's—Atlas Brass Works, San Francisco, Cal.  
Bullock Mfg. Associates, Springfield, Mass.  
C-H—Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
Clark Gas Soldering Iron—Chicago Well Supply Co., Chicago, Ill.  
Clendennin Bros., Inc., Baltimore, Md.  
Decker Mfg. Co., Newark, N. J.  
Diamond Detroit—Motor Products Corp., Detroit, Mich.  
Dobbin Mfg. Co., Stillwater, Minn.  
Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
Eureka Tempered Copper Works, North East, Pa.  
Ever-Hot—Everhot Manufacturing Co., Maywood, Ill.  
Gem—Millers Falls Co., New York, N. Y.  
General Electric Co., Schenectady, N. Y. (electric).  
Hussey, C. H., & Co., Pittsburg, Pa.  
Irvington Mfg. Co., Irvington, N. J.  
Johnson, Wm., Newark, N. J.  
Karas—Karas Electric Co., Chicago, Ill. (gasoline).  
Kaufman—The A. G. Kaufman Co., New York.  
Motor Products Corporation, Detroit, Mich.  
Peck, Stow & Wilcox Co., New York, N. Y.  
Simplex Electric Heating Co., The, Cambridge, Mass.

Union Hardware Co., Torrington, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

### COPPERS, SOLDERING, AND BLOW TORCH COMBINED

Karas Solder—Karas Electric Co., Chicago, Ill.

### COPPERS, SOLDERING (ELECTRIC).

C-H—Cutler-Hammer Mfg. Co., Milwaukee, Wis.

### COPPERSMITHING.

Badger, E. B., & Sons Co., Boston, Mass.  
Dahlquist Mfg. Co., Boston, Mass.  
Welded Steel Barrel Corp., The, Detroit, Mich.  
Young Brothers Company, Detroit, Mich.

### CORD, ARC LIGHT AND TROLLEY.

Silver Lake Co., Newtonville, Mass.

### CORD, BELL AND SIGNAL.

Chicago Rawhide Mfg. Co., Chicago, Ill.  
Franklin—Franklin Cotton Mill Co., The, Cincinnati, Ohio.  
Jewell Belting Co., Hartford, Conn.  
Ladew, Edw. R., Estate, Glen Cove, N. Y.  
Miller, Jacob, Co., Cincinnati, O.  
Page Belting Co., Concord, N. H.  
Rhoades, J. E., & Sons, Philadelphia, Pa.  
Silver Lake—Silver Lake Co., Newtonville, Mass.  
Williams, I. B., & Sons, Dover, N. H.  
Winne, Frank W., & Son, Inc., Philadelphia, Pa.

### CORDS, SASH.

Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
Wear-On—American Mills Co., Atlanta, Ga.

### CORD, WICK AND YARN, ASBESTOS.

Asbestos Fibre Spinning Co., North Wales, Pa.  
Dominion Asbestos and Rubber Corp., New York.  
Johns-Manville, Inc., New York.  
Kaltenthaler, H. J., Philadelphia, Pa.  
Keasby & Mattison Co., Ambler, Pa.  
Usaco—United States Asbestos Co., Manheim, Pa.  
Watson, H. F., Erie, Pa.

### CORDAGE, MANILA, SISAL, JUTE AND HEMP.

American Mfg. Co., New York, N. Y.  
Columbian Tape-Marked—Columbian Rope Co., Auburn, N. Y.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
Franklin—Franklin Cotton Mill Co., The, Cincinnati, Ohio.  
Hoffman-Corr Mfg. Co., New York, N. Y. (cotton).  
Hooven & Allison Co., The, Xenia, O.  
Plymouth—Plymouth Cordage Co., Plymouth, Mass.  
Red Triangle, Radium, Gibraltar—American Mills Co., Atlanta, Ga.  
Schlichter Jute Cordage Co., Philadelphia, Pa.  
Silver Lake Co., Newtonville, Mass. (braided).  
St. Louis Cordage Mills, St. Louis, Mo.  
U-W Marine—The Upson-Walton Co., Cleveland, O.  
Waterbury Co., New York, N. Y.  
Whitlock Cordage Co., New York, N. Y.  
Winne & Son, F. W., Philadelphia, Pa.

### CORDEAU.

Du Pont, E. I., de Nemours & Co., Wilmington, Del.

### CORES, PRESSED STEEL.

Berger Mfg. Co., Canton, O.

### CORK, GRANULATED, INSULATING.

Armstrong Cork & Insulation Co., Pittsburgh, Pa.

### COTTER PINS, SELF-SPREADING.

Campbell—American Chain Co., Bridgeport, Conn.  
KelKotter—American Cotter Pin Co., Pittsburgh, Pa.

### COTTER PINS AND SPRING KEYS.

American Steel Co., Pittsburgh, Pa.  
Blake & Johnson Co., Waterbury, Conn.  
Brooks, M. S., & Sons, Chester, Conn.  
Cobb & Drew, Plymouth, Mass.  
Efficiency—The Lamson & Sessions Co., Cleveland, Ohio.  
Falls River Company, Kent, Ohio.  
Hammer Lock—American Chain Co., Inc., Bridgeport, Conn.  
Hindley Mfg. Co., Valley Falls, R. I.  
Hubbard, M. D., Mfg. Co., Pontiac, Mich.  
Jenckes, E., Mfg. Co., Worcester, Mass.  
McWhorter—Bateman & Co.'s, Inc., Grenloch, N. J.  
National Screw & Tack Co., Cleveland, O.  
Pickering, R. S., Co., Sharon Hill, Pa.  
Saco—F. P. Smith & Co., Sharon Hill, Pa.



- Whitaker Mfg. Co., The, Chicago, Ill.
- Whitman & Barnes Mfg. Co., Akron, O.
- Williams, J. H. & Co., Brooklyn, N. Y.
- Wire Goods Co., Worcester, Mass.

#### COTTERS, CELLAR BOX.

(See also Cotter Pins.)

- Williams, J. H. & Co., Brooklyn, N. Y.

#### COTTON, SPUN, CAULKING.

- Baltimore Oakum Co., Baltimore, Md.
- Berkeley Mfg. & Supply Co., Jersey City, N. J.
- Bishop, Robert, Mfg. Co., Boston, Mass.
- Davey & Sons, W. O., Jersey City, N. J.
- Estes Mills, Fall River, Mass.
- Massoit Mfg. Co., Fall River, Mass.
- Superior—Stratford Oakum Co., Geo., Jersey City, N. J.

#### COUNTERBORES.

- Advance Tool Co., Cincinnati, O.
- Chapin-Skelton Corp., Syracuse, N. Y.
- Cleveland Twist Drill Co., The, Cleveland, O.
- Clough, R. M., Tolland, Conn.
- Cutwell—Bickford - Switzer Co., The, Greenfield, Mass.
- Detroit—Detroit Twist Drill Co., Detroit, Mich.
- Detroit Reamer & Tool Co., Detroit, Mich.
- Hercules—F. E. Wells & Son Co., Greenfield, Mass.
- Improved—R. M. Clough, Meriden, Conn.
- Madison—Madison Mfg. Co., Muskegon, Mich.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- National-Cleveland—National Tool Co., Cleveland, O.
- Pratt & Whitney Co., Hartford, Conn.
- Reece—F. E. Wells & Son Co., Greenfield, Mass.
- Reliable—Conant & Donelson Co., Conway, Mass.
- Scott-Spencer Automatic Tool Co., Cincinnati, O.
- Slocumb, J. T., Co., Providence, R. I.
- Starrett, L. S., Co., Athol, Mass.

#### COUNTERS AND RECORDERS, REVOLUTION OR OPERATION.

- Ashcroft—Ashcroft Mfg. Co., New York, N. Y.
- Bristol's—The Bristol Co., Waterbury, Conn.
- Bristol—The C. J. Root Co., Bristol, Conn.
- Brown—Edward Brown & Son, Philadelphia, Pa.
- Brown Instrument Co., Philadelphia, Pa.
- Crosby Steam Gage & Valve Co., Boston, Mass.
- Durbrow & Hearne Mfg. Co., New York, N. Y.
- Elm City—The C. J. Root Co., Bristol, Conn.
- Federal Gauge Co., Chicago, Ill.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Grant Mfg. & Machine Co., Bridgeport, Conn.
- Hart, R. A., Mfg. Co., Battle Creek, Mich.
- Lombard Governor Co., The, Ashland, Mass.
- Lonerger—J. E. Lonerger Co., Philadelphia, Pa.
- Marsh & Co., Jas. P., Chicago, Ill.
- McDonnell Odometer Co., Chicago, Ill.
- National Gauge Co., Brooklyn, N. Y.
- The Productimeter—Durant Mfg. Co., Milwaukee, Wis.
- Redington, F. B., Co., Chicago, Ill.
- Roco—The C. J. Root Co., Bristol, Conn.
- Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Sheppard, J. E., Co., Worcester, Mass.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Uehling—Uehling Instrument Co., Passaic, N. J.
- U. S. Standard—United States Gauge Co., New York, N. Y.
- Veeder Mfg. Co., Hartford, Conn.

#### COUNTERS, TRUCK LOAD, AUTOMATIC.

- McGahey Sure Count—J. J. Ross Mill Furnishing, The, Portland, O.

#### COUNTERSHAFTS.

- Abitz—Rockford Metal Specialty Co., Rockford, Ill.
- Almond Co., Ashburnham, Mass.
- Athol Machine & Foundry Co., Athol, Mass.
- Baird Machine Co., The, Bridgeport, Conn.
- Barry—R. & J. Dick Co., Inc., Passaic, N. J.
- Birkle Machine Works, Chicago, Ill. (small)
- Brown & Sharpe Mfg. Co., Providence, R. I.
- Buckeye—Mast, Foss & Co., Springfield, O.
- Buffalo Forge Co., Buffalo, N. Y.
- Builders' Iron Foundry, Providence, R. I.
- Champion—Champion Blower & Forge Co., Lancaster, Pa.
- Coates Clipper Mfg. Co., Worcester, Mass.
- Cortland King—Cortland Grinding Wheel Corp., Cortland, N. Y.
- Crescent—Columbia Mfg. Co., Belleville, Ill.
- Cresson-Morris Co., Philadelphia, Pa.
- Crown—Clizbe Bros. Mfg. Co., Plymouth, Ind.
- Dill, C. T. Machine Co., Philadelphia, Pa.
- Dodge Sales & Engineering Co., Mishawaka, Ind.
- Elgin—Elgin Tool Works, Elgin, Ill.
- Evans—Evans Friction Cone Co., Newton Centre, Mass.
- Falls Clutch & Machine Co., Cuyahoga Falls, Ohio.
- Fulton Machine & Forging Co., Canal Fulton, O.
- Garvin Machine Co., New York, N. Y.
- Goodell-Pratt Co., Greenfield, Mass.

- Gem—Gem Mfg. Co., Pittsburgh, Pa.
- Green River—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hannifin Mfg. Co., Chicago, Ill.
- Hanson—Hanson Clutch & Machinery Co., Tiffin, O.
- Hill Clutch Co., The, Cleveland, O.
- Holmes, E. & B., Machinery Co., Buffalo, N. Y.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Huntsville Foundry & Machine Co., Huntsville, Ala.
- Kerrihard Co., The, Red Oak, Ia.
- Le Blond, R. K., Machine Tool Co., Cincinnati, O.
- Medart Patent Pulley Co., St. Louis, Mo.
- Meese & Gottfried Co., San Francisco, Calif.
- Miller, Charles, Syracuse, N. Y.
- Niles-Bement-Pond Co., New York, N. Y.
- Partridge—E. O. Partridge, Chicago, Ill.
- Pioneer—Standard Pressed Steel Co., Philadelphia, Pa.
- Porter Machine Co., Wooster, O.
- Potts, D. H., Co., Lancaster, Pa.
- Royersford Foundry & Machine Co., Philadelphia, Pa.
- Safety Emery Wheel Co., Springfield, O.
- Sim-pull—Rhode Island Warp Stop Equipment Co., Pawtucket, R. I.
- Springfield Mfg. Co., The, Bridgeport, Conn.
- Sterling—Sterling Grinding Wheel Co., Tiffin, O.
- Stow Flexible Shaft Co., Philadelphia, Pa.
- Stow Mfg. Co., Binghamton, N. Y.
- Valley Iron Works, Williamsport, Pa.
- Welch, T. F., & Co., Boston, Mass.
- Western Chief—Canedy-Otto Mfg. Co., Chicago Heights, Ill.
- Wheaton, C. M., Providence, R. I.
- Wood's T. B. Sons Co., Chambersburg, Pa.
- Workwell—Workwell Engineering & Mfg. Co., Chicago, Ill.

#### COUNTERSINKS.

- Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Boker, H., & Co., Inc., New York, N. Y.
- Buck Bros., Millbury, Mass.
- W. C. Carver—Carver Tool Works, Spring Valley, N. Y.
- Clark Equipment Co., Buchanan, Mich.
- Cleveland Twist Drill Co., The, Cleveland, O.
- Crescent—Crescent Co., Inc., The, Meriden, Conn.
- Detroit Twist Drill Co., Detroit, Mich.
- Eclipse—Eclipse Interchanging Counterbore Co., Inc., Detroit, Mich.
- G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hargrave—The Cincinnati Tool Co., Cincinnati, O.
- Hercules—F. E. Wells & Son Co., Greenfield, Mass.
- Irrington Mfg. Co., Irvington, N. J.
- Jennings, C. E., & Co., New York, N. Y.
- Johnson, Wm., Newark, N. J.
- Kilborn-Bishop Co., New Haven, Conn.
- Lightning—Wiley & Russell Mfg. Co., Greenfield, Mass.
- Mayhew Steel Products, Inc., New York, N. Y.
- National Tool Co., Brooklyn, N. Y.
- The Scott-Spencer Automatic Tool Co., Cincinnati, O.
- Smith, Otis A., Rockfall, Conn.
- Speedster—U. S. High Speed Steel & Tool Corp., New York, N. Y.
- Star Bit & Tool Co., Rockford, Ill.
- Starrett, L. S., Co., Athol, Mass.
- Stearns & Co., E. C., Syracuse, N. Y.
- Tuck—Tuck Mfg. Co., Brockton, Mass.
- U. S. High Speed Steel & Tool Corp., New York.
- Vaughan & Bushnell Mfg. Co., Chicago, Ill.
- Whitman & Barnes Mfg. Co., Akron, O.
- Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### COUPLINGS, BELL CORD.

- L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.
- Silver Lake—Silver Lake Co., Newtonville, Mass.

#### COUPLINGS, BRASS PIPE.

- Abbott—The Columbus Brass Co., Columbus, O.
- Acheson Mfg. Co., Braddock, Pa.
- Bliss—Farnan Brass Works, Cleveland, O.
- Commonwealth Brass Corp., Detroit, Mich.
- Exeter Brass Works, Exeter, N. H.
- Haydenville Co., The, Haydenville, Mass.
- Hays Mfg. Co., Erie, Pa.
- Imperial Brass Mfg. Co., Chicago, Ill.
- Jones—Farnan Brass Works, Cleveland, O.
- Kelly & Jones Co., The, Greensburg, Pa.
- McNab & Harlin Mfg. Co., New York, N. Y.
- McRae & Roberts Co., The, Detroit, Mich.
- New Haven Screw Co., New Haven, Conn.
- Perkins, H. K., Co., Taunton, Mass.
- Pittsburg Brass Mfg. Co., Pittsburg, Pa.
- Pittsburg Valve & Fittings Co., Barborton, O.
- Powell, Wm., Co., The, Cincinnati, O.
- Richardson Brass Co., Edro, Baltimore, Md.
- Royal Brass Mfg. Co., Cleveland, Ohio.
- Salem Brass & Iron Mfg. Co., Salem, N. J.
- Sherman, H. B., Mfg. Co., Battle Creek, Mich.
- Wise, J. B., Inc., Watertown, N. Y.

#### COUPLINGS, CASING.

- Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.
- Kleinman, Russell F., Philadelphia, Pa.

**Joy Automatic Air Hose Coupler**A simple twist of  
the wrist operates

H. D. Edwards &amp; Co.

Detroit, Mich.

**COUPLINGS, COIL.**

Connersville Blower Co., Connersville, Ind.  
Pittsburgh Valve Foundry & Construction Co., Pitts-  
burgh, Pa.  
United Brass Mfg. Co., Cleveland, O.

**COUPLINGS, COMPRESSION.**

(See Couplings, Brass Pipe.)

Imperial Brass Mfg. Co., Chicago, Ill.  
The Newton Mfg. Co., Plainville, Conn.

**COUPLINGS, DRILL PIPE.**

Harrisburg Pipe & Pipe Bending Co., Harrisburg,  
Pa.  
♦ Lutz Company, Inc., Philadelphia, Pa.

**COUPLINGS, FLANGE.**

♦ Hilliard Clutch & Machinery Co., Elmira, N. Y.  
Karge System, Inc., Phoenix, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.

**COUPLINGS, FOR FLEXIBLE METAL HOSE.**

"Holdol"—C. A. Claflin Co., Boston, Mass.

**COUPLINGS, GAS AND OIL LINE.**

Custer—Custer Coupling Co., Bradford, Pa.  
Hammon Coupler Co., Mount Vernon, O.  
Harrisburg Pipe & Pipe Bending Co., Harrisburg,  
Pa.

**COUPLINGS, HOSE, ACID.**

Automatic, Navy, Underwriters—Elkhart Brass Mfg.  
Co., Elkhart, Ind.

**COUPLINGS, HOSE, AIR AND GAS.**

(See also "Fittings, Hose.")

A-B Stove Co., Dept. S, Battle Creek, Mich.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Boss—Dixon Valve & Coupling Co., Philadelphia, Pa.  
Callahan Co., The Cornelius, Boston, Mass.  
Chicago Pneumatic Tool Co., New York, N. Y.  
Cleveland Rock Drill Co., Cleveland, Ohio.  
Dallett—Thos. H. Dallett Co., Philadelphia, Pa.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
Exeter Brass Works, Exeter, N. H.  
G-A-T—Ingersoll-Rand Co., New York, N. Y.  
Goodall Rubber Co., Inc., Philadelphia, Pa.  
Goodrich Co., The B. F., Akron, O.  
Green—The Dunlap Mfg. Co., Columbus, O.  
Gunnell—Manitowoc Ship Bldg. Co., Manitowoc, Wis.  
Independent Pneumatic Tool Co., Chicago, Ill.  
Ingersoll-Rand Co., New York, N. Y.  
Joy—H. D. Edwards & Co., Detroit, Mich.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
King—Dixon Valve & Coupling Co., Philadelphia, Pa.  
Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.  
♦ Lunkenhelmer Co., Cincinnati, O.  
♦ McBee & Roberts Co., Detroit, Mich.  
National—Mann Corporation, Kankakee, Ill.  
♦ Powell Co., The Wm., Cincinnati, O.  
Push & Turn—C. A. Claflin Co., Boston, Mass.  
Reliable, Eureka—The Rauch Mfg. Co., Galena, Kan.  
Romort—Romort Mfg. Co., Oakfield, Wis.  
Schlangen Bros. Co., Chicago, Ill.  
Scully—Scully Steel & Iron Co., Chicago, Ill.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
♦ Walworth Mfg. Co., Boston, Mass.  
♦ Wolf—Boston Woven Hose & Rubber Co., Cambridge,  
Mass.

**COUPLINGS, HOSE (STEAM).**

American Foundry & Mfg. Co., St. Louis, Mo.  
Allen, W. D., Mfg. Co., Chicago, Ill.  
Boss—Dixon Valve & Coupling Co., Philadelphia.  
Chicago—Chicago Pneumatic Tool Co., New York,  
N. Y.  
Clincher—Pennsylvania Flexible Metallic Tubing Co.,  
Philadelphia, Pa.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
Fries & Co., Buffalo, N. Y.  
Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
Goodrich Co., The B. F., Akron, O.  
Haydenville Co., The, Haydenville, Mass.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
King—Dixon Valve & Coupling Co., Philadelphia, Pa.

**HOSE COUPLINGS**For Steam, Water, Suction, Gasoline  
and Fire Hose**SCHLANGEN BROS. CO.**

2435-2441 Irving Park Blvd., CHICAGO

Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Morse—Cornelius Callahan Co., Boston, Mass.  
Nob-Lok—C. A. Claflin Co., Boston, Mass.  
Nunn Brass Works, Rochester, N. Y.  
♦ Powell Co., The Wm., Cincinnati, O.  
Reliable, Eureka—The Rauch Mfg. Co., Galena, Kan.  
Schlangen Bros. Co., Chicago, Ill.  
Seattle Brass Co., Seattle, Wash.  
♦ Sherman—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
♦ Sherwood Mfg. Co., Buffalo, N. Y.  
Street & Kent Mfg. Co., Chicago, Ill.  
Strong, Carlisle & Hammond Co., Cleveland, O.  
Sure Hold—Claflin Co., C. A., Boston, Mass.  
♦ Wolf—Boston Woven Hose & Rubber Co., Cambridge,  
Mass.

**COUPLINGS, HOSE (WATER).**

Allen Fire Department Supply Co., Providence, R. I.  
Allen Mfg. Co., W. D., Chicago, Ill.  
American Brass & Copper Co., The, New York, N. Y.  
American Foundry & Mfg. Co., St. Louis, Mo.  
♦ Automatic—H. B. Sherman Mfg. Co., Battle Creek,  
Mich.  
Blas—Adheson Mfg. Co., Braddock, Pa.  
Boeckel & Co., Wm., Philadelphia, Pa.  
Boston Coupling Co., Boston, Mass.  
♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Bowes—The Cleveland Pneumatic Tool Co., Cleveland.  
Bridgman Bros. Co., Philadelphia, Pa.  
Carleton Coupling Co., Camden, Me.  
Central—L. R. Nelson, Peoria, Ill.  
Clay, John H., Philadelphia, Pa.  
Cliff & Guilbert Co., New York, N. Y.  
Corrugated—L. R. Nelson, Peoria, Ill.  
Cowan—Elkhart Brass Mfg. Co., Elkhart, Ind.  
Crane Co., Chicago, Ill.  
Dallett—Thos. H. Dallett Co., Philadelphia, Pa.  
Eureka—Rauch Mfg. Co., The, Galena, Kans.  
Feyh—The Allen Fire Department Supply Co., Provi-  
dence, R. I.  
Feyh—Callahan, Cornelius, Co., The, Boston, Mass.  
Feyh—Farnan Brass Works, Cleveland, O.  
Fisher & Co., A. J., Pittsburg, Pa.  
Fries & Co., Buffalo, N. Y.  
Garratt & Co., W. T., San Francisco, Cal.  
Gaylord—The Allen Fire Department Supply Co.,  
Providence, R. I.  
Gaylord—Callahan Co., The Cornelius, Boston, Mass.  
General Fire Extinguisher Co., Providence, R. I.  
Gilmore—The Allen Fire Department Supply Co., The,  
Providence, R. I.  
Gilmore—Union Brass & Metal Mfg. Co., St. Paul.  
Globe Mfg. & Supply Co., Pittsburg, Pa.  
♦ Hamilton—Hamilton Rubber Mfg. Co., Trenton, N. J.  
Haydenville Co., The, Haydenville, Mass.  
♦ Hays Mfg. Co., Erie, Pa.  
Hoffmann Mfg. Co., B., Milwaukee, Wis.  
Howell Brass Works, F. R., Philadelphia, Pa.  
Jiffy—The Jiffy Fire Hose Rack Co., New York, N. Y.  
Johnson—Johnson Service Co., Milwaukee, Wis.  
Jones—Allen Fire Department Supply Co., Providence,  
R. I.  
Jones—Callahan Co., The Cornelius, Boston, Mass.  
♦ Jones—Hamilton Rubber Mfg. Co., Trenton, N. J.  
Jost's Sons, Edmund, Newark, N. J.  
Kalamazoo—Riverside Foundry & Galvanizing Co.,  
Kalamazoo, Mich.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
King—Dixon Valve & Coupling Co., Philadelphia, Pa.  
Kinsey & Mahler Co., Peoria, Ill.  
Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.  
Larkin—Larkin Mfg. Co., Dayton, O.  
Lightning—Handian-Buck Mfg. Co., St. Louis, Mo.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Manitowoc Ship Building & Dry Dock Co., Manitowoc,  
Wis.  
♦ Mill—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
Morgan Mfg. Co., Inc., Keene, N. H.  
Morse—Callahan Co., The Cornelius, Boston, Mass.  
Mulconroy—Mulconroy Co., Inc., Philadelphia, Pa.  
Navy—Elkhart Brass Mfg. Co., Elkhart, Ind.  
Neverslip—Macungie Brass & Mfg. Co., Macungie, Pa.  
♦ Niedner's Sons Co., Chas., Malden, Mass.  
Nunn Brass Works, Rochester, N. Y.  
Peck Bros. & Co., The, New Haven, Conn.  
Perfect Clinching—L. R. Nelson, Peoria, Ill.  
Perkes, Chas., Co., Philadelphia, Pa.  
Pioneer Brass Works, Indianapolis, Ind.  
♦ Powell Co., The Wm., Cincinnati, O.  
Powhatan Brass & Iron Works, Ranson, W. Va.

## Black and Galvanized

*Standard, Extra Heavy, Line and Casing*

# Pipe Couplings

Nipples, Long Screws, Cut Pipe, Etc.

**N. C. CRESSMAN CO.**  
Philadelphia, Penn.

- Rauch—The Rauch Mfg. Co., Galena, Kan.  
 Reliable—The Rauch Mfg. Co., Galena, Kan.  
 Rex Fire Appliance Co., New York, N. Y.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 ♦ Safety—Sherwood Mfg. Co., Buffalo, N. Y.  
 Sargent—Ingersoll-Rand Co., New York, N. Y.  
 Schlangen Bros. Co., Chicago, Ill.  
 Schrader's Sons, Inc., A., New York, N. Y.  
 Seattle Brass Co., Seattle, Wash. (expansion ring).  
 ♦ Sherman—E. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Simmons Co., John, New York, N. Y. (expansion ring).  
 Snap—L. R. Nelson, Peoria, Ill.  
 Standard Brass & Iron, Milwaukee, Wis.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Swivel Hose Coupling Co., Chicago, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Universal—The Allen Fire Department Supply Co., Providence, R. I.  
 Universal—Callahan Co., The, Cornelius, Boston, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 ♦ Waterbury Brass Goods Corporation, The, Waterbury, Conn.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Watts—John M. Watts Sons, Philadelphia, Pa.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodhouse Mfg. Co., The, New York, N. Y.  
 Woodward-Wanger Co., Philadelphia, Pa.

### COUPLINGS, MALLEABLE IRON.

(See also "Fittings" and "Unions, Malleable Iron.")

- Grip—Ware Coupling & Nipple Co., Ware, Mass.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Providence Fittings Co., Boston, Mass.

### COUPLINGS, METAL.

Teksagon—H. W. Clark Co., Mattoon, Ill.

### COUPLINGS, MOTOR.

Birkle Machine Works, Chicago, Ill.

### COUPLINGS, PIPE, BOLTED JOINT.

- American Spiral Pipe Works, Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass.

### COUPLINGS, PIPE, CAST IRON.

- Central Tube Co., Pittsburg, Pa. (black and gal.)  
 Crane Co., Chicago, Ill.  
 Essex Foundry, Newark, N. J.  
 Howard Iron Works, Buffalo, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 K—Kuhns Bros., Dayton, O.

### COUPLINGS, PIPE, EXTRA HEAVY.

- Cressman, N. C. Co., Philadelphia, Pa.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kleinman, Russell F., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

### COUPLINGS, PIPE, OFFSET REDUCING.

- American Sanitary Mfg. Co., Abingdon, Ill.  
 Detroit—Detroit Brass & Malleable Works, Detroit.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 K—Kuhns Bros., Dayton, O.  
 N. T. C.—National Tube Co., Pittsburg, Pa.

### COUPLINGS, PIPE, REPAIR.

- Ampinco—American Pin Co., Waterbury, Conn.  
 Dayton Pipe Coupling Co., Dayton, Ohio.

Black and Galvanized  
 Standard, Extra Heavy, Line and Casing

# Pipe Couplings

Cast Iron and

# Malleable Fittings

**A. & J. MANUFACTURING CO.**

559 W. Lake St., Chicago, Ill.

Queen City—Fries & Co., Buffalo, N. Y.  
 Trenton Brass & Machine Co., The, Trenton, N. J.

### COUPLINGS, PIPE, WROUGHT IRON AND STEEL.

- A. & J. Mfg. Co., The, Chicago, Ill.  
 Byers, A. M., Co., Pittsburgh, Pa.  
 Cohoes Rolling Mills Co., Cohoes, N. Y.  
 Cressman, N. C. Co., Philadelphia, Pa.  
 Cuyler & Mohler Co., Baltimore, Md.  
 Dresser—S. R. Dresser Mfg. Co., Bradford, Pa.  
 Gwilliam Supply Co., Philadelphia, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kleinman, Russell F., Philadelphia, Pa.  
 N. T. C.—National Tube Co., Pittsburg, Pa.  
 Reddy Machine Screw Co., New Haven, Conn.  
 Western Automatic Machine Screw Co., Elyria, O.  
 ♦ Youngstown—Youngstown Sheet & Tube Co., The

### COUPLINGS, PUMP ROD.

- Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.

### COUPLINGS, RANGE BOILER.

- Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Copper Co., The, New York, N. Y.  
 Anderson—Pratt & Cady Co., Hartford, Conn.  
 Atkinson Co., The, Rochester, N. Y.  
 Briggs, Inc., William, Brooklyn, N. Y.  
 Cahill Mfg. Co., Worcester, Mass.  
 Dick Bros., Inc., Reading, Pa.  
 Exeter Brass Works, Exeter, N. H.  
 Flagg, Stanley G., & Co., Philadelphia, Pa.  
 Flannery, P. J., Co., New Britain, Conn.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Hayes Pump & Planter Co., Galva, Ill.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Hamilton Brass Works, John, Bridgeport, Conn.  
 Hoffman Mfg. Co., Milwaukee, Wis.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass. (union).  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kitson Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Providence Fittings Co., Boston, Mass.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Savill's Sons, Thomas, Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Stebbins Mfg. Co., E. Springfield, Mass.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Metal Works, Chelsea, Mass.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Webb, F. W., Mfg. Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill.

### COUPLINGS, SEWER ROD.

- Felton Pat—Waldo Bros & Bond Co., Boston, Mass.  
 Illinois Malleable Iron Co., Chicago, Ill.

### COUPLINGS, SHAFT, COMPRESSION.

- ♦ Dodge—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Hunter—James Hunter Machine Co., North Adams, Mass.  
 ♦ Pyott, Geo. W. Co., Chicago, Ill.  
 ♦ Spiro—Bond Foundry & Machine Co., Manheim, Pa.  
 ♦ Woods' Sons Co., T. B., Chambersburg, Pa.

**COUPLINGS, SHAFT, CUT-OFF AND FRICTION CLUTCH.**

- Brown—The A. & F. Brown Co., New York, N. Y.  
 Butler Electric Clutch Co., Yonkers, N. Y.  
 Competitor—American Clutch Mfg. Co., Boston, Mass.  
 Constant, B. S., Mfg. Co., The, Bloomington, Ill.  
 Conway—The Conway Clutch Co., Cincinnati, O.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Edgemont—The Edgemont Machine Co., Dayton, O.  
 Erie—Erie Clutch & Pulley Co., Erie, Pa.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Falls—The Falls Clutch & Machinery Co., Cuyahoga Falls, O.  
 Hanson—Hanson Clutch & Machinery Co., The, Tiffin, O.  
 Hess-Snyder Co., The, Massillon, O.  
 Hill (Smith Type)—Hill Clutch Co., The, Cleveland, O.  
 Hill, Hub, Worrall—American Tool & Machine Co., Boston, Mass.  
 Hilliard—Hilliard Clutch & Machinery Co., Elmira, N. Y.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hunter Machine Co., James, North Adams, Mass.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Interchange, Worrall—Kinney Mfg. Co., Boston, Mass.  
 Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Johnson—The Carlyle, Johnson Machine Co., Manchester, Conn.  
 J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Lemley—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 McMahon & Co., Worcester, Mass.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Meeseco—Meese & Gottfried Co., San Francisco, Cal.  
 Minster Machine Co., The, Minster, O.  
 Moore & White Co., The, Philadelphia, Pa.  
 Mule-Pull—Brown Clutch Co., Sandusky, O.  
 Naylor Bros., Peekskill, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 O. K.—O. K. Clutch & Machinery Co., Columbia, Pa.  
 Peerless—Essemueller Mill Furnishing Co., St. Louis, Mo.  
 Schultz, A. L., Son, Chicago, Ill.  
 Sinclair-Scott Co., The, Baltimore, Md.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Star—Carl G. Westlund Co., Worcester, Mass.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Universal Giant—T. B. Wood's Sons Co., Chambersburg, Pa.  
 Valley Iron Works, Williamsport, Pa.  
 Westlund—Carl G. Westlund Co., Worcester, Mass.  
 Wolf Co., The, Chambersburg, Pa.

**COUPLINGS, SHAFT, ECCENTRIC GRIP.**

- Bull Dog—Safety First Mfg. Co., Alexandria, Va.

**COUPLINGS, SHAFT, FLANGE OR PLATE.**

- Atlanta Mfg. & Supply Co., Atlanta, Ga.  
 Barry—Barry Co., Muscatine, Ia.  
 Bliss & Laughlin, Inc., Harvey, Ill.  
 Bond Co., Charles, Philadelphia, Pa.  
 Brightman Machine Co., The, Cleveland, O.  
 Bull Dog—Safety First Mfg. Co., Alexandria, Va.  
 Canton Foundry & Machine Co., The, Canton, O.  
 Chicago Pulley & Shafting Co., Chicago, Ill.  
 Clark Flexible—I. H. Dexter Co., Inc., Goshen, N. Y.  
 Constant, B. S., Mfg. Co., The, Bloomington, Ill.  
 Cresson Morris Co., Philadelphia, Pa.  
 Dodge Collins, Grim Death—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Dow, L. B., Inc., Keene, N. H.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Erie Clutch & Pulley Co., Erie, Pa.  
 Falls Clutch & Machinery Co., Cuyahoga Falls, O.  
 Franklin Machine Co., Providence, R. I.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 Great Western Mfg. Co., Leavenworth, Kas.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 Hendershot—Valley Iron Works, Williamsport, Pa.  
 Hill Clutch Co., The, Cleveland, O.  
 Hilliard Clutch & Machinery Co., Elmira, N. Y.  
 Howard Iron Works, Buffalo, N. Y.  
 Howe Chain Co., Muskegon, Mich.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Jones, W. A., Foundry & Machine Co., Chicago, Ill.  
 Karge System, Inc., Phoenix, N. Y.  
 Keystone—Keystone Pulley Co., Oneida, N. Y.  
 LeValley—Chain Belt Co., Milwaukee, Wis.  
 Link-Belt Company, Chicago and Philadelphia.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Minster Machine Co., Minster, O.  
 Mule-Pull—Brown Clutch Co., Sandusky, O.  
 National Foundry Mfg. Supply Co., Williamsport, Pa.  
 Naylor Bros., Peekskill, N. Y.  
 Nicholson—W. H. Nicholson & Co., Wilkesbarre, Pa.  
 Nordyke & Marmon Co., Indianapolis, Ind.

- Pintite—Smith & Serrell Co., Newark, N. J.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Prescott Co., The, Menominee, Mich.  
 Royersford Foundry & Machine Co., Philadelphia, Pa.  
 S. & S.—Shaffer—Shaffer Clutch Works, The, Buffalo, N. Y.  
 Salem Foundry & Machine Works, Salem, Va.  
 Sellers, Williams & Co., Inc., Philadelphia, Pa.  
 Shaw—American Tool & Machine Co., Boston, Mass.  
 Shaw's Acme, Ajax, Hercules (Single and Double Compression)—Shaw Coupling Co., Syracuse, N. Y.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Standard Iron Works, Sherman, N. Y.  
 Standco—Standard Pressed Steel Co., Philadelphia.  
 Townsend Furnace & Machine Shop Co., Albany, N. Y.  
 Tranter—Tranter Mfg. Co., Pittsburgh, Pa.  
 Valley Iron Works, Williamsport, Pa.  
 Walters—Mechanical Devices Co., Watervliet, N. Y.  
 Webster Mfg. Co., Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.  
 Wheland—Wheland Co., Chattanooga, Tenn.  
 Wolf Co., The, Chambersburg, Pa.  
 Woods' Universal Giant—T. B. Woods Sons Co., Chambersburg, Pa.  
 Worrall—American Tool & Machine Co., Boston, Mass.

**COUPLINGS, SHAFT, FLEXIBLE.**

- Ajax—Ajax Flexible Coupling Co., Westfield, N. Y.  
 Aldrich—Aldrich Pump Co., The, Allentown, Pa.  
 Birle Machine Works, Chicago, Ill.  
 Brown, A. & F., Co., New York, N. Y.  
 Brown Engineering Co., Reading, Pa.  
 Bruce-Macbeth—MacBeth Engine Co., Cleveland, O.  
 Clark Flexible—I. H. Dexter Co., Inc., Goshen, New York.  
 Cooper—Cooper Flexible Transmission Co., Inc., Brooklyn, N. Y.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Cutler—B. F. Sturtevant Co., Boston, Mass.  
 Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
 Dexter—I. H. Dexter Co., Inc., New York, N. Y.  
 Falls—Falls Clutch & Machinery Co., Cuyahoga Falls.  
 Fawcus—Fawcus Machine Co., Pittsburgh, Pa.  
 Flexo—Lloyd Engineering Co., Montclair, N. J.  
 Francke—Smith & Serrell, Newark, N. J.  
 General Electric Co., Schenectady, N. Y.  
 Grundy—Bond Foundry & Machine Co., Mannheim, Pa.  
 Grundy-Mather—Charles Bond Co., Philadelphia, Pa.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Karge System—Karge System, Inc., Phoenix, N. Y.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Nuttall, R. D. Co., Pittsburgh, Pa.  
 Shays, J. R., Jr., New York, N. Y.  
 Stephenson Quill—Westinghouse Machine & Mfg. Co., Pittsburgh, Pa.  
 Thermoid—Thermoid Rubber Co., Trenton, N. J.  
 Uniflex—Thompson Bros., Philadelphia, Pa.  
 White Auto-Tite—International Coupler Co., Pittsburgh, Pa.  
 Whitney—The Barker Factory, Norwalk, Conn.  
 Woods, T. B., Sons Co., Chambersburg, Pa.

**COUPLINGS, SHAFT, JAW CLUTCH.**

- American Tool & Machine Co., Boston, Mass.  
 Chicago Pulley & Shafting Co., Chicago, Ill.  
 Constant, B. S., Mfg. Co., The, Bloomington, Ill.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Guyasuta Mfg. Co., Sharpsburg, Pa.  
 Hill Clutch Co., Cleveland, O.  
 Hendershot—Valley Iron Works, Williamsport, Pa.  
 Hot Water—H. F. Watson Co., Erie, Pa.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.  
 McMahon & Co., Worcester, Mass.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Naylor Bros., Peekskill, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Norrish, Burnham & Co., Glen Rock, Pa.  
 Royersford Fdry. & Mach. Co., Philadelphia, Pa.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Webster Mfg. Co., Chicago, Ill.  
 Wood's Sons Co., T. B., Chambersburg, Pa.

**COUPLINGS, SHAFT, UNIVERSAL JOINT**

- Medart Patent Pulley Co., St. Louis, Mo.  
 Snead & Co., Jersey City, N. J.  
 Webster Mfg. Co., Chicago, Ill.  
 Woods, T. B., Sons Co., Chambersburg, Pa.

**COUPLINGS, SOLDERING.**

- Exeter Brass Works, Exeter, N. H.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Mueller Mfg. Co., H., Decatur, Ill.

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Mueller, H. Mfg. Co., Decatur, Ill.  
Providence Fittings Co., Boston, Mass.

#### COUPLINGS, VENT.

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Fries & Co., Buffalo, N. Y.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hamilton Brass Works, John, Bridgeport, Conn.  
Haydenville Co., The, Haydenville, Mass.  
Perkes Co., Chas., Philadelphia, Pa.  
Smith-Matthews Foundry Co., Detroit, Mich.  
♦ United Brass Mfg. Co., Cleveland, O.

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Okay—E. Stebbins Mfg. Co., Springfield, Mass.

#### COUPLINGS, WATER METER.

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Fries & Co., Buffalo, N. Y.  
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Richter—Richter & Co., Cincinnati, O.  
Teksagon—Clark, H. W., Co., Mattoon, Ill.

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Nonpareil Cork, Nonpareil High Pressure—Armstrong Cork & Insulating Co., Pittsburg, Pa.  
Sawyer's—American Insulating Co., Alexandria, Ind.  
Security—Central Asbestos & Magnesia Co., Chicago.  
Watson, H. F., Erie, Pa.

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Air Cell—H. F. Watson Co., Erie, Pa.  
Air Cell—National Asbestos Mfg. Co., Jersey City, N. J.  
Ambler, Asbestos—Keasbey & Mattison Co., Ambler, Pa.  
American Seal—Connors Paint Mfg. Co., The William, Troy, N. Y.  
Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Bestix—Jos. W. Hays Corp., Michigan City, Ind.  
Carey—The Philip Carey Co., Cincinnati, O.  
Chicago Asbestos Mfg. Co., Chicago, Ill.  
Clasbestos—H. F. Watson, Erie, Pa.  
Climax—Acme Asbestos Cov. & Supply Co., Chicago.  
Coal Savers—R. E. Kramig & Co., Cincinnati, Ohio.  
Crawford, L. M., Denver, Colo.  
Detroit—C. Stanley Morgan, Detroit, Mich. (wool felt).  
♦ Diamond "N"—Norristown Magnesia & Asbestos Co., Norristown, Pa.  
Dominion Asbestos & Rubber Corp., New York.  
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Durabestos—Albion Mfg. Co., Seattle, Wash.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
Eureka—H. F. Watson Co., Erie, Pa.  
Excella—C. Stanley Morgan, Detroit, Mich.  
Frigid—C. Stanley Morgan, Detroit, Mich. (wool felt).  
Frost Protection—H. F. Watson Co., Erie, Pa.  
Green, A. H., Camden, N. J.  
Illinois Fire Proof Covering Co., Inc., Chicago, Ill.

Imperial—H. F. Watson Co., Erie, Pa.  
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Keasbey Co., Robt. A., New York, N. Y.  
Laminuro, R. R. Special—Franklin Mfg. Co., Franklin, Pa.  
Lion—Central Asbestos & Magnesia Co., Chicago, Ill.  
Mikesell Brothers Co., Chicago, Ill.  
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Norristown Magnesia & Asbestos Co., Norristown, Pa.  
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Racich Asbestos Mfg. Co., New York, N. Y.  
R. M. C.—Richards Mfg. Co., Grand Rapids, Mich.  
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Standard—C. Stanley Morgan, Detroit, Mich.  
Star—Chicago Fire Proof Covering Co., Chicago, Ill.  
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Union—Union Fibre Co., Winona, Minn.  
Union Rubber & Asbestos Co., Trenton, N. J.  
Victor—Acme Asbestos Covering & Supply Co., Chicago, Ill.  
W. B.—H. F. Watson Co., Erie, Pa.  
Western Asbestos & Mfg. Co., Denver, Colo.  
Xealls—C. Stanley Morgan, Detroit, Mich.  
Yukon—Acme Asbestos Covering & Supply Co., Chicago, Ill.

#### COVERING, BOILER, CEMENT.

Ambler, Asbestos—Keasbey & Mattison Co., Ambler, Asbestos—Acme Asbestos Covering & Supply Co., Chicago, Ill.  
Johns-Manville, Inc., New York, N. Y.  
♦ Norristown Magnesia & Asbestos Co., Norristown, Pa.  
Richards-Wilson Pipe Covering Co., Grand Rapids, Mich.  
Watson, H. F., Erie, Pa.

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Chicago Rawhide Mfg. Co., Chicago, Ill.  
Cincinnati Gasket & Packing Co., Cincinnati, O.  
Eclipse—Eclipse Pulley Covering Co., Chicago, Ill.  
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♦ Graton & Knight Mfg. Co., Worcester, Mass.  
Grip-Tite—Cincinnati Gasket & Packing Co., Cincinnati, O.  
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Leather Parts Co., Indianapolis, Ind.  
Leather Preserver Mfg. Co., Chicago, Ill.  
Leather-to-Metal—F. Ranville Co., Grand Rapids, Mich.  
♦ Mor-Peel—The Bradford Belting Co., Cincinnati, O.  
No Slip—Peerless Belting Co., Gardenville, N. Y.  
Perfect—Kingsley Mfg. Co., Indianapolis, Ind.  
Power-Glue—The Power-Glue Mfg. Co., Chicago, Ill.



Reinhold Belting & Supply Co., Inc., Brooklyn, N. Y.  
Washington's Superior—W. S. Raymond, Niles, Mich.  
Western Pulley Stone Co., Chicago, Ill.

#### COVERING, ROLLER.

Hervey—F. L. Hervey & Co., Inc., Fall River, Mass.

#### COVERING OR CASING, STEAM PIPE.

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Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Bannon, F., Sewer Pipe Co., Louisville, Ky. (tile).  
Detroit, Superior—C. Stanley Morgan, Detroit, Mich.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
Enduro—C. Stanley Morgan, Detroit, Mich.  
Johns-Manville, Inc., New York.  
Michigan Pipe Co., Bay City, Mich. (wood).  
Morgan—C. Stanley Morgan, Detroit, Mich.  
National Air Cell Covering Co., Jersey City, N. J.  
Pacific Coast Pipe Co., Seattle, Wash.  
Portland Stone Ware Co., Portland, Me.  
Standard Wood Pipe Co., Williamsport, Pa.  
Tyler Underground Heating Systems, Pittsburgh, Pa.  
Union Asbestos & Rubber Co., Chicago, Ill.  
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Glauber Brass Mfg. Co., Cleveland, O.  
Haydenville Co., Haydenville, Mass.  
Hays Mfg. Co., Erie, Pa.  
Kretschmer Mfg. Co., Dubuque, Ia.  
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Boosey—Greenwood Mfg. Co., Detroit, Mich.  
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South Bend Foundry Co., South Bend, Ind.  
Wade Iron Sanitary Mfg. Co., Chicago, Ill.  
Wesely—Chas. Wesely Co., Chicago, Ill. (concrete)

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Illinois Malleable Iron Co., Chicago, Ill.  
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South Bend Foundry Co., South Bend, Ind.

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South Bend Foundry Co., South Bend, Ind.

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Nustone Products Corp., New York, N. Y.  
Olmstead-Thomson Mfg. Co., New Britain, Conn.  
Ramsdell Household Granite Tub Co., New Haven, Conn.  
Shwab Bros. Co., New York, N. Y.  
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Weiskittel, A., & Sons Co., Baltimore, Md.

#### COVERS AND FRAMES, LAUNDRY TRAY, WOOD.

(See also "Woodwork, Plumbers.")

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Berglass Mfg. Co., M. P., Brooklyn, N. Y.  
D. & M.—D. & M. Specialty Co., Cleveland, O.  
Furlong, Thos. N., San Francisco, Cal.  
Kingston Granite Tub Works, Kingston, N. Y.  
Leclair Cabinet Works, Edwardsville, Ill.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.

Olmstead-Thomson Mfg. Co., The, New Britain, Conn.  
Philadelphia Sheet Metal & Wood Works, Philadelphia, Pa.

Shwab Bros. Co., New York, N. Y.

Swett, A. L., Iron Works, Medina, N. Y.

#### COVERS AND FRAMES, MANHOLE AND SEWER.

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Barber Mfg. Co., The, Ashtabula, O.

Barnes Mfg. Co., The, Mansfield, O.

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Brayman—Brayman Water-Tight Drain Co., New York, N. Y.

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Brown Bros. Mfg. Co., Chicago, Ill.

Canton Foundry & Machine Co., The, Canton, O.

Casey-Hedges Co., The, Chattanooga, Tenn.

Clark—H. W. Clark Co., Mattoon, Ill.

Clow, James B., & Sons, Chicago, Ill.

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Cooper Foundry Co., Atchison, Kan.

Craig—David Craig, Boston, Mass.

Davis & Farnum Mfg. Co., Waltham, Mass.

Dimmick Pipe Co., The, Birmingham, Ala.

Dobbie Foundry & Machine Co., Niagara Falls, N. Y.

Dougherty Safety—Owen T. Dougherty, St. Paul, Minn.

Duplex Mfg. & Foundry Co., Elyria, O.

Eclipse—Monroe & Sons Mfg. Corp., Pittsburgh, Pa.

Eddy Foundry Co., R. M., Chicago, Ill.

Elkhart Foundry & Machinery Co., Elkhart, Ind.

Fee & Mason Mfg. Co., New York, N. Y.

Foram Foundry & Mfg. Co., Flemington, N. J.

Fox, John, & Co., New York, N. Y.

Glenn Mfg. Co., St. Charles, Ill.

Hajoca—Haines, Jones & Cadbury Co., Philadelphia.

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Illinois Malleable Iron Co., Chicago, Ill.

Indiana Foundry Co., Indiana, Pa.

Jones Hollow Ware Co., Baltimore, Md.

Kokomo Brass Works, Kokomo, Ind.

Lukens Steel Co., Coatesville, Pa.

Lynchburg Foundry Co., Lynchburg, Va.

McDonald Foundry, The, Columbus, O.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

Modern Iron Works, Quincy, Ill.

Mott Iron Works, The J. L., Trenton, N. J.

National Tube Co., Pittsburgh, Pa.

Pittsburg Valve, Foundry & Construction Co., Pittsburg, Pa.

Roe—Glasgow Iron Co., Philadelphia, Pa.

Sanitary Company of America, Linfield, Pa.

Sessions Foundry Co., Bristol, Conn.

South Bend Foundry Co., South Bend, Ind.

Star—Hunt, Helm, Ferris & Co., Harvard, Ill.

Stuart's Safety—Stuart Foundry Co., Detroit, Mich.

Swett Iron Works, A. L., Medina, N. Y.

Thacher—Thacher Propeller & Foundry Corp., Albany, N. Y.

Treaty Co., The, Greenville, Ohio.

Tyler Underground Heating System, Pittsburgh, Pa.

Valley Machine Co., Parkersburg, W. Va.

Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.

Wolverine Foundry Co., Detroit, Mich.

#### COVERS, NUT.

Erie Stamping & Mfg. Co., Erie, Pa.  
Glauber Brass Mfg. Co., Cleveland, O.

#### COVERS, OIL HOLE.

Bennett—Bay State Stamping Co., Worcester, Mass.  
Bowen—Bowen Mfg. Co., Auburn, N. Y.  
Detroit—Detroit Lubricator Co., Detroit, Mich.  
Fischer Special Mfg. Co., Cincinnati, Ohio.  
Tucker—W. W. & C. F. Tucker, Hartford, Conn.  
Worcester Pressed Steel Co., Worcester, Mass.

#### COVERS OR JACKETS, RANGE BOILER.

Keystone—Johns-Manville, Inc., New York, N. Y.  
Royal Thermos—Bastian-Morley Co., La Porte, Ind.

#### COVER REPAIR (FOR SERVICE BOXES).

American Foundry & Mfg. Co., St. Louis, Mo.  
Sanitary Company of America, Linfield, Pa.  
Ysire—Hays Mfg. Co., Erie, Pa.

#### COVERS, SERVICE BOX.

American—American Foundry & Mfg. Co., St. Louis, Mo.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Clark—H. W. Clark Co., Mattoon, Ill.  
Ford—Ford Meter Box Co., Wabash, Ind.  
Ideal—The Ideal Mfg. Co., Detroit, Mich.  
Illinois Malleable Iron Co., Chicago, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Sanitary Company of America, Linfield, Pa.  
Walworth Mfg. Co., Boston, Mass.  
Ysire—Hays Mfg. Co., Erie, Pa.



**COVERS, SUMP, GARAGE.**

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Stuart Foundry Co., Detroit, Mich.

**COVERS, TRAP, FLOOR.**

Acheson Mfg. Co., Braddock, Pa.  
Alliance Brass Foundry Co., Detroit, Mich.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Ampinco—American Fin Co., Waterbury, Conn.  
Blake—Blake Specialty Co., Rock Island, Ill.  
Burlington Brass Works, Burlington, Wis.  
Keystone Brass Works, Inc., Erie, Pa.  
M-V-B—Morency-Van Buren Mfg. Co., Sturgis, Mich.  
Old Style—Sanitary Company of America, Linfield, Pa.  
Sure Seal—Sanitary Company of America, Linfield, Pa.  
Van—Van Mfg. Co., Boston, Mass.

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Swett Iron Works, A. L., Medina, N. Y.

**CRABS, HOISTING.**

American—American Hoist & Derrick Co., St. Paul, Minn.  
♦ Brown Hoist—The Yale & Towne Mfg. Co., New York.  
Brown Hoisting Machinery Co., Cleveland, O.  
Buffalo Contractors Plant Corp., Buffalo, N. Y.  
Clyde Iron Works, Duluth, Minn.  
Dake Engine Co., Grand Haven, Mich.  
Dobbins Fdy. & Machine Co., Niagara Falls, N. Y.  
Fairbanks, Morse & Co., Chicago, Ill.  
Parker, S. E., Chicago, Ill.  
Round & Son, D., Cleveland, O.  
♦ Yale & Towne Mfg. Co., Stamford, Conn.

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Link-Belt Company, Chicago and Philadelphia, Pa.  
Orton & Steinbrenner Co., Chicago, Ill.

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Box, Alfred, & Co., Inc., Philadelphia, Pa.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
Toledo—Toledo Crane Co., Bucyrus, O.

**CRANES, HYDRAULIC.**

Alliance Machine Co., Alliance, O.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Cincinnati Iron & Steel Co., Cincinnati, O.  
Cleveland Crane & Engineering Co., Cleveland, O.  
Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.  
Southwark Foundry & Machine Co., Philadelphia, Pa.  
Toledo Bridge & Crane Co., Toledo, O.  
United Engineering & Foundry Co., Pittsburg, Pa.  
Watson-Stillman Co., Aldene, N. J.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Fdy. Equipment Co., Harvey, Ill.  
Wood & Co., R. D., Philadelphia, Pa.  
Wood, William H., Media, Pa.

**CRANES, INDUSTRIAL TRUCK.**

Bradney Machine Co., Inc., Middletown, N. Y.

**CRANES, JIB.**

Allen Engineering Co., Philadelphia, Pa.  
Alliance Machine Co., Alliance, O.  
Barber-Foster—Barber-Foster Engineering Co., Cleveland, Ohio.  
Batavia Engineering Works, Batavia, Ill.  
Box—Alfred Box & Co., Inc., Philadelphia, Pa.  
Brown Hoisting Machinery Co., Cleveland, O.  
Browning—Victor R. Browning Co., Cleveland, O.  
Buch Foundry Equipment Co., York, Pa.  
Byram & Co., Detroit, Mich.  
Chisholm & Moore Mfg. Co., Cleveland, O.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Conco—H. D. Conkey & Co., Mendota, Ill.  
Crane & Engineering Co., Columbus, O.  
Curtis Pneumatic Mch. Co., St. Louis, Mo.  
Euclid Crane & Hoist Co., Euclid, O.  
Johnston & Jennings Co., Cleveland, O.  
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Marion Steam Shovel Co., Marion, O.  
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Morgan Construction Co., Worcester, Mass.  
Morgan Engineering Co., Alliance, O.  
New Jersey Foundry & Machine Co., New York, N. Y.

Niles-Bement Pond Co., New York City.  
Northern Engineering Works, Detroit, Mich.  
Osgood Co., Marion, Ohio.  
Parker, S. E., Chicago, Ill.  
Pawling & Harnischfeger Co., Milwaukee, Wis.  
Reading Chain & Block Corp., Reading, Pa.  
Ridgway, Craig & Son, Coatesville, Pa.  
Round, D. & Son, Cleveland, O.  
R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
Toledo Bridge & Crane Co., Toledo, O.  
Whiting Foundry Equipment Co., Harvey, Ill.  
Wood, R. D., & Co., Philadelphia, Pa.  
♦ Yale & Towne Mfg. Co., Stamford, Conn.

**CRANES, LOCOMOTIVE.**

American—American Hoist & Derrick Co., St. Paul, Minn.  
Bradney Machine Co., Inc., Middletown, N. Y.  
Brownhoist—The Brown Hoisting Machinery Co., Cleveland, O. (Steam, gasoline, electric and gas electric.)  
Browning—Browning Sommer, Adams Co., Cleveland, O.  
Buffalo Hoist & Derrick Co., Buffalo, N. Y.  
Byers, John F., Machine Co., Ravenna, O.  
Carroll Foundry & Machine Co., The, Bucyrus, O.  
Davenport—Davenport Locomotive Wks., Davenport, Iowa.  
Farrell Foundry & Machine Co., Ansonia, Conn.  
Hanna Engineering Works, Chicago, Ill.  
Industrial Works, Bay City, Mich.  
Koehring Company, The, Milwaukee, Wis.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
McMyler-Interstate Co., Bedford, C.  
Morgan Engineering Co., Alliance, O.  
New Jersey Foundry & Machine Co., New York, N. Y.  
Northern Engineering Works, Detroit, Mich.  
Ohio Locomotive Crane Co., Bucyrus, O.  
Orthon & Steinbrenner Co., Chicago, Ill.  
Osgood Co., Marion, Ohio.  
Seaverns, James B., Chicago, Ill.  
Thew—The Thew Shovel Co., Lorain, O. (Steam, gasoline, electric.)  
Vulcan Steam Shovel Co., Toledo, O.  
Wellman-Seaver-Morgan Co., Cleveland, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

**CRANES, MAGNET.**

Cleveland Crane & Engineering Co., Wickliffe, O.  
Cutler-Hammer Co., Milwaukee, Wis.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

**CRANES, MATERIAL HANDLING.**

Link-Belt Company, Chicago and Philadelphia, Pa.  
Terry, Edward F. Mfg. Co., New York.

**CRANES, MOTOR TRUCK.**

Mead & Morrison Mfg. Co., E. Boston, Mass.  
Orton & Steinbrenner Co., Chicago, Ill.  
Terry, Edward F., Mfg. Co., New York.

**CRANES, PILLAR.**

Industrial Works, Bay City, Mich.  
Melco—Maine Electric Co., The, Portland, Me.  
New Jersey Foundry & Machine Co., New York, N. Y.

**CRANES, PNEUMATIC.**

Brown Hoisting Machinery Co., Cleveland, O.  
Chicago Pneumatic Tool Co., New York, N. Y.  
Detroit Hoist & Machine Co., Detroit, Mich.  
Hanna Engineering Works, Chicago, Ill.  
Ingersoll-Rand Co., New York, N. Y.  
Northern Engineering Works, Detroit, Mich.  
Ryerson, Jos. T., & Son, Chicago, Ill.  
Q. M. S.—Vulcan Engineering Sales Co., Chicago, Ill.  
Toledo Bridge & Crane Co., Toledo, O.  
Whiting Foundry Equipment Co., Harvey, Ill.

**CRANES, PORTABLE.**

(See also "Hoists, Portable.")

Baker, Raulang—The R. & L. Baker Co., Cleveland, Ohio.  
Bradney Machine Co., Inc., Middletown, N. Y.  
Byers, John F., Machine Co., The, Ravenna, O.  
Champion—S. G. Milton & Son, Franklin, Pa.  
Crane & Engineering Co., Columbus, O.  
Fox Bros. & Co., New York, N. Y.  
Franklin—The Franklin Portable Crane & Hoist Co., Franklin, Pa.  
General Vehicle Co., Long Island City, N. Y. (automobile)  
Hammond—Beatty Machine & Mfg. Co., Hammond, Ind.  
"Handiest Tool in the Shop"—Canton Foundry & Machine Co., The, Canton, O.  
Hercules—Wm. S. Nicholls, Honesick Falls, N. Y.  
C. W. Hunt Co., West New Brighton, N. Y.

Ingersoll-Rand Co., New York, N. Y.  
 Lafayette—Lafayette Engineering Co., Lafayette, Ind. (steel).  
 Link-Belt Company, Chicago and Philadelphia.  
 Manley Mfg. Co., York, Pa.  
 Manly—United Engine & Mfg. Co., Hanover, Pa.  
 Mummert-Dixon Co., Hanover, Pa. (and grinder combined).  
 Never Slip—Barrett-Cravens Co., Chicago, Ill.  
 O'Brien, James H., Scale & Supply Co., New York, N. Y.  
 Patterson-Kelley Co., The, New York, N. Y.  
 Pull-U-Out Products Co., St. Louis, Mo.  
 Pullifter—Giant Cable Hoist Co., Cleveland, O.  
 Reading Chain & Block Corp., Reading, Pa.  
 R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Simplex—D. Round & Son, Cleveland, O.  
 Weaver Hoist—Weaver Mfg. Co., Springfield, Ill.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 ♦ Yale & Towne Mfg. Co., The, Stamford, Conn.

#### CRANES, SOAKING PIT.

Morgan Engineering Co., Alliance, Ohio.

#### CRANES, STEAM.

Link-Belt Company, Chicago and Philadelphia, Pa.  
 Morgan Construction Co., Worcester, Mass.  
 Thew Shovel Co., The, Lorain, O.

#### CRANES, TRANSFER

Byers Machine Co., The John F., Ravenna, O.  
 ♦ C. M.—The Chisholm-Moore Mfg. Co., Cleveland, O.  
 Euclid—Euclid Crane & Hoist Co., Euclid, O.  
 Industrial works, Bay City, Mich.  
 Link-Belt Company, Chicago and Philadelphia.  
 New Jersey Foundry & Machine Co., New York.  
 Pawling & Harnischfeger Co., Milwaukee, Wis.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Toledo—Toledo Crane Co., Bucyrus, O.

#### CRANES, TRAVELING, ELECTRIC.

Alliance Machine Co., Alliance, O.  
 Anderson & Co., Ltd., Geo., Newark, N. J.  
 Armington—Armington Engineering Co., Wickliffe, O.  
 Barber-Foster—Barber-Foster Engineering Co., Cleveland, Ohio.  
 Bedford Foundry & Machine Co., Bedford, Ind.  
 Box—Alfred Box & Co., Inc., Philadelphia, Pa.  
 Browning—Browning-Sommer-Adams Co., Cleveland, O.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Conco—Conkey, H. D., & Co., Mendota, Ill.  
 ♦ C. M.—The Chisholm-Moore Mfg. Co., Cleveland, O.  
 Curtis & Co. Mfg. Co., St. Louis, Mo.  
 Curtis Pneumatic Machinery Co., St. Louis, Mo.  
 Detroit Hoist & Machine Co., Detroit, Mich.  
 Euclid Crane & Hoist Co., Euclid, O.  
 Imperial—Franklin, Moore Co., Winsted, Conn.  
 Johnston & Jennings Co., Cleveland, O.  
 Lane Mfg. Co., Montpelier, Vt.  
 Link-Belt Company, Chicago and Philadelphia.  
 Loudon Machinery Co., Fairfield, Iowa.  
 Maris Bros., Philadelphia, Pa.  
 Milwaukee—Milwaukee Electric Crane & Mfg. Co., Milwaukee, Wis.  
 Moore Co., The Franklin, Winsted, Conn.  
 Morgan Engineering Co., Alliance, O.  
 New Jersey Foundry & Machine Co., New York, N. Y.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Northern Engineering Works, Detroit, Mich.  
 Parker, S. E., Chicago, Ill.  
 Pawling & Harnischfeger Co., Milwaukee, Wis.  
 Reading—Reading Chain & Block Corp., Reading, Pa.  
 Roeper Crane & Hoist Works, Reading, Pa.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Shaw—Manning Maxwell & Moore, Inc., New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Shriver, T., & Co., Harrison, N. J.  
 Simplex—D. Round & Son, Cleveland, O.  
 Sprague—Sprague Electric Works, New York, N. Y.  
 Stamp Electric Hoist Co., San Francisco, Cal.  
 Toledo—Toledo Crane Co., Bucyrus, O.  
 Vulcan—Vulcan Mfg. Co., Seattle, Wash.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 ♦ Wright Mfg. Co., Lisbon, O.  
 ♦ Yale & Towne Mfg. Co., Stamford, Conn.

#### CRANES, TRAVELING, HAND POWER.

Arctic Ice Machine Co., The, Canton, Ohio.  
 Armington Engineering Co., Wickliffe, O.  
 Box—Alfred Box & Co., Inc., Philadelphia, Pa.  
 Brown Hoisting Machinery Co., The, Cleveland, O.  
 Busch Co., J. C., Milwaukee, Wis.  
 Canton Foundry & Machine Co., The, Canton, Ohio.  
 Case—The Crane & Engineering Co., Columbus, O.  
 Chambersburg Engineering Co., Chambersburg, Pa.

Cleveland—Cleveland Crane & Engineering Co., Wickliffe, O.  
 Conco—Conkey, H. D., & Co., Mendota, Ill.  
 Dobbie Fdy. & Machine Co., Niagara Falls, N. Y.  
 Euclid—Euclid Crane & Hoist Co., Euclid, Ohio.  
 Hercules—Wm. S. Nichols, Hoosick Falls, N. Y.  
 Industrial Works, Bay City, Mich.  
 Lane Mfg. Co., Montpelier, Vt.  
 Loudon Machinery Co., The, Fairfield, Iowa.  
 Maris Bros., Philadelphia, Pa.  
 Moore Co., The Franklin, Winsted, Conn.  
 New Jersey Foundry & Machine Co., New York, N. Y.  
 Niles-Bement-Pond Co., New York, N. Y.  
 O'Brien, James H., Scale & Supply Co., New York, N. Y.  
 Parker, S. E., Chicago, Ill.  
 Patterson-Kelley Co., The, New York, N. Y.  
 Paxson Co., J. W., Philadelphia, Pa.  
 Q M S—Hanna Engineering Works, Chicago, Ill.  
 Reading—Reading Chain & Block Corp., Reading, Pa.  
 Roeper Crane & Hoist Works, Reading, Pa.  
 R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Speidel, J. G., Reading, Pa.  
 Toledo—Toledo Crane Co., Bucyrus, O.  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 ♦ Wright—Wright Mfg. Co., Lisbon, O.  
 ♦ Yale & Towne Mfg. Co., Stamford, Conn.  
 Young Mfg. Co., R. W., Chicago, Ill.

#### CRANES, WATER (TANK WAGON FILLING).

Ludlow Valve Mfg. Co., Troy, N. Y.

#### CRANES, WRECKING AUTOMOBILE.

Manley Mfg. Co., York, Pa.

#### CRANKS, BALL.

Cincinnati—Cincinnati Ball Crank Co., Cincinnati, O.

#### CRANKS, LOOM.

Babbitt—Babbitt Steam Specialty Co., New Bedford, Mass.

#### CRAYONS, INDUSTRIAL.

American Lava Co., Chattanooga, Tenn.  
 Binney & Smith Co., New York.  
 Colonial Mfg. Co., Chattanooga, Tenn.  
 Dixon Crucible Co., Jos., Jersey City, N. J.  
 Georgia Talc Co., Asheville, N. C.  
 Gold Medal—Binney & Smith Co., New York, N. Y.  
 National Products Co., East Liverpool, O.  
 Paxson Co., J. W., Philadelphia, Pa.  
 Standard—Standard Crayon Mfg. Co., Danvers, Mass.  
 Steward, D. M., Mfg. Co., Chattanooga, Tenn.  
 Superior—Standard Oil Co. of New York, New York, N. Y.  
 Talc Products Co., New York, N. Y.  
 Technical Supply Co., Scranton, Pa.  
 Zelnicker Crayon Works, St. Louis, Mo. Trade names—Zelnicker, Elson, Giant, Easymark, Steelmark, Supermark, Suremark.

#### CREEPERS, ICE.

Sayre, L. A. Co., Newark, N. J.

#### CRIMPERS, CAP.

♦ Du Pont—E. I. Du Pont De Nemours & Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

#### CRIMPERS, STOVEPIPE.

S. & I. Co., The, Springfield, Mass.

#### CROSSES, BRASS.

(See "Fittings, Brass.")

#### CROSSES, CAST IRON.

(See also "Fittings, Pipe, Cast Iron.")  
 Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 ♦ American District Steam Co., North Tonawanda, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Crane Co., Chicago, Ill.  
 C. C.—Crane Valve Co., Bridgeport, Conn.  
 Direct Separator Co., Syracuse, N. Y.  
 Essex Foundry, Newark, N. J.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Kallenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kuhns Bros., Dayton, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Pittsburg Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**CROSSES, MALLEABLE IRON.**

(See also "Fittings, Pipe, Malleable Iron.")

- C. Crane—Crane Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

**CROSSES AND TEES, VENT.**

Frost Mfg. Co., The, Kenosha, Wis.

**CROSSOVERS, PIPE, BRASS.**

(See also "Pipe Fittings, Brass.")

- Acheson Mfg. Co., Braddock, Pa.  
 Richardson, Edro, Brass Co., Baltimore, Md.

**CROSSOVERS, PIPE, MALLEABLE.**

- Detroit Brass & Malleable Works, Detroit, Mich.  
 Forster, Waterbury & Co., Franklin Park, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 N. T. C.—National Tube Co., Pittsburg, Pa.  
 Pittsburg Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**CROWBARS.**

- American Shovel & Stamping Co., Lorain, O.  
 Clay, John H., Philadelphia, Pa.  
 ♦ Horseshoe—The Stanley Rule and Level Plant, Atha Dept., New Britain, Conn.  
 Hubbard & Co., Pittsburg, Pa.  
 Iron City Star—Iron City Tool Works, Pittsburg, Pa.  
 Leetonia Tool Co., Leetonia, Ohio.  
 New Castle Forge & Bolt Co., New Castle, Pa.  
 ♦ Oliver Iron & Steel Co., Pittsburg, Pa.  
 Pittsburg Tool & Drop Forge Co., Cheswick, Pa.  
 Salem Tool Co., The, Salem, O.  
 Union Drop Forge Co., Chicago, Ill.  
 Warren Tool & Forge Co., The, Warren, O.  
 Warwood—Warwood Tool Co., Wheeling, W. Va.

**CRUCIBLES AND RETORTS.**

- Chicago Crucible Co., Chicago, Ill.  
 Crayons—Dixon Crucible Co. Jos., Jersey City, N. J.  
 Gautier & Co., J. H., Jersey City, N. J.  
 Jonathan Bartley Crucible Co., Trenton, N. J.  
 McCullough-Dalzell Crucible Co., Pittsburg, Pa.  
 Seidel—R. B. Seidel, Inc., Philadelphia, Pa.  
 Smith Engineering Works, Milwaukee, Wis.  
 Taylor—Robert J. Taylor, Philadelphia, Pa.  
 U. S. Indestructible Gasket Co., New York, N. Y. (imported).

**CRUSHING PLANTS, CONTRACTORS' PORTABLE.**

Smith Engineering Works, Milwaukee, Wis.

**CUPOLAS FOR FOUNDRIES.**

- Barry & Zecher Co., Lancaster, Pa.  
 Bryam & Co., Detroit, Mich.  
 Calumet Engineering Works, Harvey, Ill.  
 Colliat—Central Foundry Supply Co., Columbus, O.  
 Hill & Griffith Co., Cincinnati, O.  
 McCormick, J. S., Co., Pittsburgh, Pa.  
 Newton—Northern Engineering Works, Detroit, Mich.  
 Obermayer, S. Co., The, Cincinnati, O.  
 Paxson, J. W., Co., Philadelphia, Pa.  
 Ritter-Conly Co., Pittsburg, Pa.  
 Sly, W. W., Mfg. Co., Cleveland, O.  
 J. D. Smith Foundry Supply Co., Cleveland, O.  
 Tropenas Co., Brooklyn, N. Y.  
 Whiting Foundry Equipment Co., Harvey, Ill.

**CUPS (AND NOZZLES), DRINKING FOUNTAIN, PORCELAIN.**

Karl Hutter, Inc., New York, N. Y.

**CUPS, DRIP.**

- ♦ Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.  
 Federal-Huber Co., Chicago.

**CUPS, GREASE, AUTOMATIC, GAS ENGINE.**

- ♦ American Injector Co., Detroit, Mich.  
 Essex Brass Corp., Detroit, Mich.

**CUPS, GREASE, COMPRESSION.**

- ♦ Active—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Ajax Hafunel—City Iron Works & Machine Co., Philadelphia, Pa.  
 Albany, Alpha, Cook's—Adam Cook's Sons, New York.  
 Allen, W. D., Mfg. Co., Chicago, Ill.  
 ♦ American—American Injector Co., Detroit, Mich.  
 American—American Lubricator Co., Detroit, Mich.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 American Stamping Co., Battle Creek, Mich.  
 Art—American Lubricator Co., Detroit, Mich.  
 Automatic—American Lubricator Co., Detroit, Mich.  
 Bassick Co., The, Bridgeport, Conn.  
 Bennett—Bay State Stamping Co., Worcester, Mass.  
 Bowen Products Corp., Minneapolis, Minn.

- Case & Son Mfg. Co., W. A., Buffalo, N. Y.  
 CO, Crane—Crane Co., Chicago, Ill.  
 Chicago—The Ohio Injector Co., Wadsworth, O.  
 Columbia—W. D. Allen Mfg. Co., Chicago, Ill.  
 ♦ Daisy, Dakota, Diamond, Dahlia, Diana, Derby, Dwarf, Dragon, Duke—The D. T. Williams Valve Co., Cincinnati, O.  
 Dawson—Dawson Mfg. Co., Chicago, Ill.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Electric Water Sterilizer & Ozon Co., Scottsdale, Pa.  
 Empress—Bowen Products Corp., Auburn, N. Y.  
 English Chemical Co., Chicago, Ill.  
 Erie—Erie Stamping & Mfg. Co., Erie, Pa.  
 Essex Brass Corp., Detroit, Mich.

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All styles and sizes.

Heavy Cast Brass.

Quality—Price—Service

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2004 Franklin St.,

Detroit, Mich.

- Faul, William J., New York, N. Y.  
 ♦ Force—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 France—The France Packing Co., Philadelphia, Pa.  
 Garratt & Co., W. T., San Francisco, Cal.  
 Garrison—Garrison Co., The, Bridgeport, Conn.  
 Gibbs—W. D. Allen Mfg. Co., Chicago, Ill.  
 Golden Rule—W. D. Allen Mfg. Co., Chicago, Ill.  
 Great Western Oil Co., The, Cleveland, O.  
 Guillott Metal Gasket & Supply Co., Chicago, Ill.  
 Halle—Hall Mfg. Co., Harrison, N. J.  
 ♦ Kant-Leak—Michigan Lubricator Co., Detroit, Mich.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 K. M.—K. M. Mfg. Co., The, Toledo, Ohio.  
 Large-Hex—City Iron Works & Machine Co., Philadelphia, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 ♦ Lion—American Lubricator Co., Detroit, Mich.  
 Livermore, Homer F., Inc., Boston, Mass.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O. Trade names:  
 Apollo, Atlas, Checklock, Ferro, Grip, Gem, Guard, Ideal, Jewel, Lion, Lock, Majestic, Marine, Owl, Positive, Primo, Rex, Wingo, Surety, Tiger, Dextro, Teeferro.  
 McKee—Lindholm Metal Stamping Co., Camden, N. J.  
 McKinnon Iron Works Co., Ashtabula, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 Madeira—Lindholm Metal Stamping Co., Camden, N. J.  
 "M & E"—Merchant & Evans Co., Philadelphia, Pa.  
 Milwaukee Valve Co., Milwaukee, Wis. (plain brass).  
 Moak Machine & Tool Co., Port Huron, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 ♦ Navy—American Lubricator Co., Detroit, Mich.  
 ♦ Never Slip—American Injector Co., Detroit, Mich.  
 ♦ New Idea—Acheson Mfg. Co., Braddock, Pa.  
 ♦ Niagara—Sherwood Mfg. Co., Buffalo, N. Y.  
 ♦ Nunn's Acme—Nunn Brass Works, Rochester, N. Y.  
 Ohio—Ohio Grease Lubricant Co., The, Loudonville, O.  
 Organ—Keystone Lubricating Co., Philadelphia, Pa.  
 Peerless—W. D. Allen Mfg. Co., Chicago, Ill.  
 Perfection—Chicago Engineer Supply Co., Chicago, Ill.  
 Perkes, Chas. Co., Philadelphia, Pa.  
 Polar—W. D. Allen Mfg. Co., Chicago, Ill.  
 ♦ Powell Co., The Wm., Cincinnati, O. Trade names:  
 Automatic, Bear, Bruno, Coin, Colonial, Consort, Compression, Mascot, Mac, Mecca, Mikado, Mogul, Progress, Renown, Steel, Vanguard, Famous, Heather, Popular, Sterling Tiny.  
 Premium—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 ♦ Protevus—J. E. Lonergan Co., Philadelphia, Pa.  
 Ratchett—Gee Cee Co., Port Huron, Mich.  
 ♦ Reliable—Michigan Lubricator Co., Detroit, Mich.  
 ♦ Reno—Lindholm Metal Stamping Co., Camden, N. J.  
 Richardson-Phenix Co., The, Milwaukee, Wis.  
 ♦ Samson—Penberthy Injector Co., Detroit, Mich.  
 ♦ Saturn—Penberthy Injector Co., Detroit, Mich.  
 ♦ Screw Feed—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Searing—Lewis Searing Co., The, Detroit, Mich.  
 ♦ Senator—Penberthy Injector Co., Detroit, Mich.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y. Trade names—  
 Buffalo, Compression, Screw Feed, Sherwood.  
 ♦ Silex—Penberthy Injector Co., Detroit, Mich.  
 ♦ Simplex—Lindholm Metal Stamping Co., Camden, N. J.  
 ♦ Spring Compression—Michigan Lubricator Co., Detroit, Mich.  
 ♦ Star—American Injector Co., Detroit, Mich.  
 Stauffer—McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Swift—The Swift Lubricator Co., Elmira, N. Y.  
 Venango—Keystone Lubricating Co., Philadelphia, Pa.



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All styles and sizes. Made with red cast brass trimmings, well finished, strong and substantial.

**ESSEX BRASS CORPORATION**  
2004 Franklin St., Detroit, Mich.

- ◆ Weimer Machine Works Co., Lebanon, Pa.
- ◆ Williams—The D. T. Williams Valve Co., Cincinnati, Ohio.
- ◆ Wolverine Brass Works, Grand Rapids, Mich.
- ◆ Worcester Pressed Steel Co., Worcester, Mass.

### CUPS, GREASE, COMPRESSION, AUTOMATIC.

- ◆ Airspring—Hunter Pressed Steel Co., Lansdale, Pa.
- ◆ American Injector Co., Detroit, Mich.
- ◆ CC—Crane Co., Chicago, Ill.
- ◆ Dandy—The D. T. Williams Valve Co., Cincinnati, O.
- ◆ Duchess—The D. T. Williams Valve Co., Cincinnati, O.
- ◆ Essex—Essex Brass Corp., Detroit, Mich.
- ◆ France—The France Packing Co., Philadelphia, Pa.
- ◆ Industrial Requirements Co., Philadelphia, Pa.
- ◆ Liberty—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Lindholm, Camden—Lindholm Metal Stamping Co., Camden, N. J.
- ◆ Marquette—W. D. Allen Mfg. Co., Chicago, Ill.
- ◆ Moon—American Injector Co., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Spring—Michigan Lubricator Co., Detroit, Mich.
- ◆ Swift Lubricator Co., Elmira, N. Y.
- ◆ Walworth Mfg. Co., Boston, Mass.

### CUPS, GREASE, GRAVITY

- ◆ Essex Brass Corp., Detroit, Mich.
- ◆ Hunter—Hunter Pressed Steel Co., Lansdale, Pa.

### CUPS, GREASE, IRON.

- ◆ Bear, Famous—The Wm. Powell Co., Cincinnati, O.
- ◆ Bruno—The Wm. Powell Co., Cincinnati, O.
- ◆ Marquette, Reliable—W. D. Allen Mfg. Co., Chicago.
- ◆ McKinnon Iron Works Co., Ashtabula, O.
- ◆ Swift Lubricator Co., Elmira, N. Y.
- ◆ Western—W. D. Allen Mfg. Co., Chicago, Ill.

### CUPS, GREASE, LOCOMOTIVE.

- ◆ Walworth Mfg. Co., Boston, Mass.

### CUPS, HYDRAULIC.

(See "Packing, Leather, Hydraulic.")

### CUPS, LEATHER.

(See "Leathers, Hydraulic." and "Packing, Hydraulic.")

- ◆ American Washer Works, Brooklyn, New York.
- ◆ Chicago Belting Co., Chicago, Ill.
- ◆ Cincinnati Gasket & Packing Co., Cincinnati, O.
- ◆ Colebrook's Sons, W. H., Syracuse, N. Y.
- ◆ Dominion Asbestos and Rubber Corp., New York.
- ◆ Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.
- ◆ Fieldco—R. B. Field & Co., Worcester, Mass.
- ◆ Graton & Knight Mfg. Co., Worcester, Mass.
- ◆ Helland's—Geo. W. Hellands, New York.
- ◆ Illinois Mechanical Leather Co., Chicago, Ill.
- ◆ Johnson Co., The Henry, Jersey City, N. J.
- ◆ Judd & Leland Mfg. Co., Clifton Springs, N. Y.
- ◆ Kendrick Valve & Washer Co., Syracuse, N. Y.
- ◆ Kroms—The Chicago Rawhide Mfg. Co., Chicago.
- ◆ Marsh, Chas. W., Co., Muskegon, Mich.
- ◆ Rockford Leather Washer Co., Rockford, Ill.
- ◆ Sherman Mfg. Co., H. B., Battle Creek, Mich.
- ◆ Sunset—L. P. Degen Belting Co., San Francisco, Calif.
- ◆ Sutherland, L. F., Detroit, Mich.
- ◆ Vtm—E. F. Houghton & Co., Philadelphia, Pa.
- ◆ Wear Well—The Detroit Leather Specialty Co., Inc., Detroit, Mich.
- ◆ Wolverine Brass Works, Grand Rapids, Mich.
- ◆ Woodward-Wanger Co., Philadelphia, Pa.

### CUPS OR OILERS, CRANK PIN.

- ◆ American—American Injector Co., Detroit, Mich.
- ◆ American—American Lubricator Co., Detroit, Mich.
- ◆ Anti-Stand—Wm. W. Nugent & Co., Chicago
- ◆ Cyclone—Keystone Brass Co., Erie, Pa.
- ◆ Economy—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Edna Brass Mfg. Co., The, Cincinnati, O.
- ◆ Essex Brass Corp., Detroit, Mich.
- ◆ Gee Cee Co., Port Huron, Mich.
- ◆ Hall's—Hall Mfg. Co., New York, N. Y.
- ◆ Lee—The Wm. O. Lee Co., Port Huron, Mich.
- ◆ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ McEae & Roberts Co., The, Detroit, Mich.
- ◆ Michigan—Michigan Lubricator Co., Detroit, Mich.
- ◆ Nathan Mfg. Co., New York, N. Y.



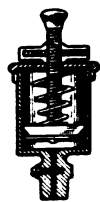
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- ◆ Ohio—The Ohio Injector Co., Wadsworth, O.
- ◆ Phillips Co., The, Somerville, Mass.
- ◆ Pin—American Injector Co., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O. Trade names: Parole, Planet, Pluto.
- ◆ Rich Mfg. Co., Boston, Mass.
- ◆ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.
- ◆ Telescopic—Wm. W. Nugent Co., Chicago, Ill.
- ◆ Williams, D. T., Valve Co., The, Cincinnati, O.

### CUPS, OIL FORCE FEED.

- ◆ Oil-Kipp—Madison-Kipp Corp., Madison, Wis.

### CUPS, OIL, GLASS BODY.

- ◆ American—American Injector Co., Detroit, Mich.
- ◆ American—American Lubricator Co., Detroit, Mich.
- ◆ Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.
- ◆ CC—Crane Co., Chicago, Ill.
- ◆ Chicago—The Ohio Injector Co., Wadsworth, O.
- ◆ Detroit—Detroit Lubricator Co., Detroit, Mich.
- ◆ Edna Brass Mfg. Co., The, Cincinnati, O.
- ◆ Essex—Essex Brass Corp., Detroit, Mich.
- ◆ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ McEae & Roberts Co., The, Detroit, Mich.
- ◆ Michigan—Michigan Lubricator Co., Detroit, Mich.
- ◆ National Brass Manufacturing Co., Rochester, N. Y.
- ◆ No-Ta—Rich Mfg. Co., Boston, Mass.
- ◆ Pilgrim—The Wm. Powell Co., Cincinnati, O.
- ◆ Pilot—Essex Brass Corp., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Puritan—The Wm. Powell Co., Cincinnati, O.
- ◆ Signal—The Wm. Powell Co., Cincinnati, O.
- ◆ Yankee—W. D. Allen Mfg. Co., Chicago, Ill.

### CUPS, OIL, LOCOMOTIVE GUIDE.

- ◆ Edna Brass Mfg. Co., The, Cincinnati, O.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Lunkenheimer Co., Cincinnati, O. Trade Names—Acorn, Hawk, Cardinal, Champion, Crown, Miami, Pioneer, Reserve, Royal, Sentinel, Victor.
- ◆ Pittsburgh Valve & Fittings Co., Barberton, O.
- ◆ Powell Co., The Wm., Cincinnati, O.

### CUPS, OIL, LOOSE FULLEY.

- ◆ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Michigan—Michigan Lubricator Co., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.

### CUPS, OIL, MULTIPLE.

(See also "Lubricators, Force Feed.")

- ◆ American Injector Co., Detroit, Mich.
- ◆ Essex Brass Corp., Detroit, Mich.
- ◆ Michigan—Michigan Lubricator Co., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Rich Mfg. Co., Boston, Mass.

### CUPS, OIL, PLAIN BRASS AND GLASS, ETC.

- ◆ Allen, W. D., Mfg. Co., Chicago, Ill.
- ◆ American—American Injector Co., Detroit, Mich.
- ◆ American Safety Lamp & Mine Sup. Co., Scranton, Pa.
- ◆ Bartow's Signal Oil—Hall Mfg. Co., Harrison, N. J.
- ◆ Bennett—Bay State Stamping Co., Worcester, Mass.
- ◆ Buckeye Iron & Brass Works, Dayton, O.
- ◆ Bassick Co., The, Bridgeport, Conn.
- ◆ CC—Crane Co., Chicago, Ill.
- ◆ Challenge—American Lubricator Co., Detroit, Mich.
- ◆ Conus—American Galco Co., New York, N. Y.
- ◆ Corsair—The Wm. Powell Co., Cincinnati, O.
- ◆ Crosby Steam Gage & Valve Co., Boston, Mass.
- ◆ Detroit—Detroit Lubricator Co., Detroit, Mich.
- ◆ Edna Brass Mfg. Co., The, Cincinnati, Ohio.
- ◆ Emerald—J. E. Lonergan Co., Philadelphia, Pa.
- ◆ Emergency—American Injector Co., Detroit.
- ◆ Empress—Bowen Products Corp., Auburn, N. Y.
- ◆ Erie—Erie Stamping & Mfg. Co., Erie, Pa.
- ◆ Essex—Essex Brass Corp., Detroit, Mich.

- Exeter Brass Works, Exeter, N. H.**  
 ♦ **Explosive**—American Injector Co., Detroit, Mich. (glass).  
**Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.**  
**Four Ace**—Matchless Revere—Revere Rubber Co., Chelsea, Mass.  
**Gaco**—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
**Garratt & Co., W. T., San Francisco, Cal.**  
**Gits**—Gits Bros. Mfg. Co., Chicago, Ill.  
**Globe Perfection**—Nunn Brass Works, Rochester, N. Y.  
 ♦ **Guardian**—E. B. Sherman Mfg. Co., Battle Creek, Mich.  
**Guillott Metal Gasket & Supply Co., Chicago, Ill.**  
**Hall Mfg. Co., Harrison, N. J.**  
 ♦ **Hurrah**—J. E. Lonergan Co., Philadelphia, Pa.  
**Indestructible**—United States Metallic Packing Co., Philadelphia, Pa.  
 ♦ **I X L**—Penberthy Injector Co., Detroit, Mich.  
**Jerome Metallic Packing Co., Chicago, Ill.**  
**Justrite Mfg. Co., Chicago, Ill.**  
 ♦ **Kelly & Jones Co., The, Greensburg, Pa.**  
 ♦ **King**—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ **K. M.—Kinsey & Mahler Co., Peoria, Ill.**  
**Lonergan Co., J. E., Philadelphia, Pa.**  
 ♦ **Lunkenheimer Co., The, Cincinnati, O.** Trade names:  
 Acorn, Champion, Hawk, Cardinal, Crown, Miami, Pioneer, Reserve, Royal, Sentinel, Victor.  
**McNab & Harlin Mfg. Co., New York, N. Y.**  
 ♦ **Michigan**—Michigan Lubricator Co., Detroit, Mich.  
**Nathan Mfg. Co., New York, N. Y.**  
**National Brass Mfg. Co., Rochester, N. Y.**  
**Newcups**—Newton Mfg. Co., The, Plainville, Conn.  
**Nugent—Wm. W. Nugent & Co., Chicago, Ill.**  
**Nunn's Sight Feed**—Nunn Brass Works, Rochester.  
 ♦ **Nu Thawt**—J. E. Lonergan Co., Philadelphia, Pa.  
**Ohio**—The Ohio Lubricator Co., Wadsworth, O.  
 ♦ **Penberthy I. X. L.**—Penberthy Injector Co., Detroit, Mich.  
 ♦ **Perfect**—E. B. Sherman Mfg. Co., Battle Creek, Mich.  
 ♦ **Pet**—American Injector Co., Detroit, Mich. (glass).  
**Pittsburgh Valve & Fittings Co., Barberton, O.**  
**Powell—Wm. Powell Co., The, Cincinnati, O.**  
**Powhatan Brass & Iron Works, Ranson, W. Va.**  
**Purves**—Purves Mfg. Corporation, Syracuse, N. Y.  
 ♦ **Reruco**—Revere Rubber Co., Boston, Mass.  
**Rich Mfg. Co., Boston, Mass.** (gravity, telescopic, etc.)  
**Richardson, Edro, Brass Co., Baltimore, Md.**  
 ♦ **Safety**—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ **Safety**—Penberthy Injector Co., Detroit, Mich.  
 ♦ **Sancho**—Penberthy Injector Co., Detroit, Mich.  
**Scott, J. E., Cup Co., Columbus, O.**  
 ♦ **Screw Top**—Penberthy Injector Co., Detroit, Mich.  
 ♦ **Sentry**—Penberthy Injector Co., Detroit, Mich.  
 ♦ **Shamrock**—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ **Sherman Mfg. Co., E. B., Battle Creek, Mich.**  
 ♦ **Sherwood Mfg. Co., Buffalo, N. Y.**  
**Shurflo Hunter Pressed Steel Co., Lansdale, Pa.**  
 ♦ **Slide Top**—Penberthy Injector Co., Detroit, Mich.  
**Star—Star Brass Mfg. Co., Boston, Mass.**  
 ♦ **Sun—American Injector Co., Detroit, Mich.**  
 ♦ **Suredrop**—Penberthy Injector Co., Detroit, Mich.  
 ♦ **Swift**—The Swift Lubricator Co., Elmira, N. Y.  
 ♦ **Tacoma, Tamarack, Tandem, Tarrant, Temple, Topaz, Tremont, Tacoma, Terrier, Trophy, Wizard, Wyandotte, Walrus, Worthy, Wonder**—The D. T. Williams Valve Co., Cincinnati, O.  
 ♦ **Trident**—The Wm. Powell Co., Cincinnati, O.  
**Tucker—W. P. & C. F. Tucker, Hartford, Conn.**  
**United States Metallic Packing Co., Philadelphia, Pa.**  
 ♦ **Walworth Mfg. Co., Boston, Mass.**  
**Wickersham—John M. Watts Sons, Philadelphia, Pa.**  
**Yankee**—W. D. Allen Mfg. Co., Chicago, Ill.

**CUPS, OIL, SLIDE.**

- Essex Brass Corp., Detroit, Mich.**  
 ♦ **Michigan**—Michigan Lubricator Co., Detroit, Mich.  
**Nugent—Wm. W. Nugent & Co., Chicago, Ill.**  
 ♦ **Powell Co., Wm. The, Cincinnati, O.** Trade names:  
 Penguin, Petrel, Phoenix.

**CUPS, PLUMBERS' FORCE.**

- Algo**—Auburn Leather Goods Co., Auburn, N. Y.  
**Bernz, Otto, Newark, N. J.**  
**Blocks**—American Spring Force Cup Mfg. Co., Chicago, Ill.  
**Buckley Rubber Co., J. W., New York, N. Y.**  
**Bull Dog, Dollar Brand**—J. A. Sexauer Mfg. Co., New York.  
**Bunnell, W. H., New York, N. Y.**  
**Butterworth Supply Co., Philadelphia, Pa.**  
**Canfield**—H. O. Canfield Co., Bridgeport, Conn.  
**Canfield Rubber Co., The, Bridgeport, Conn.**  
**Coleman**—Allan J. Coleman, Chicago, Ill.  
**Continental Rubber Works, Erie, Pa.**  
**Daisy**—Schacht Rubber Mfg. Co., Huntington, Ind.  
**Diamond**—The Diamond Rubber Corp., Akron, O.  
**Duplex**—Duplex Mfg. Co., Philadelphia, Pa.  
**Elkhart Rubber Works, Elkhart, Ind.**  
**Goodrich**—The B. F. Goodrich Rubber Co., Akron, O.  
**Holland Rubber Co., New York, N. Y.**  
**Johnson, Wm., Newark, N. J.**  
**Junior**—The Canfield Rubber Co., Bridgeport, Conn.  
**Knapp Mfg. & Supply Co., New York, N. Y.**  
 ♦ **Mechanical Rubber Co., Cleveland, Ohio.**

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**Pennsylvania Rubber Co., The, Jeanette, Pa.**  
**Quaker City Rubber Co., Philadelphia, Pa.**  
**Qualifine**—Woodward-Wanger Co., Philadelphia, Pa.  
**"Streno-Clamp"**—Samuel Lewis, New York, N. Y.  
 ♦ **Thermold Rubber Co., Trenton, N. J.**  
**United States Supply Co., Omaha, Neb.**  
**Williams-Bowman Rubber Co., The, Chicago, Ill.**  
**Wolverine**—Wolverine Brass Works, Grand Rapids, Mich.

**CUPS, PLUMBERS' SOIL.****Bernz, Otto Co., Newark, N. J.****Johnson, Wm., Newark, N. J.****Schmitt, Wm., Co., Newark, N. J.****CUPS, PRIMING.**

- Acme Brass Works, Detroit, Mich.**  
**Allen Mfg. Co., W. D., Chicago, Ill.**  
**American—American Lubricator Co., Detroit, Mich.**  
**American Brass & Iron Co., Detroit, Mich.**  
 ♦ **American—American Injector Co., Detroit, Mich.**  
**Britton**—Peter A. Frasse & Co., Inc., New York, N. Y.  
**Brown-McLaren Mfg. Co., Detroit, Mich.**  
**Commonwealth Brass Corp., Detroit, Mich.**  
**Detroit Brass & Malleable Works, Detroit, Mich.**  
 ♦ **Detroit**—Detroit Lubricator Co., Detroit, Mich.  
**Dole**—The Dole Valve Co., Chicago, Ill.  
**Empress**—Bowen Products Corp., Auburn, Div., Auburn, N. Y.  
**Essex Brass Corp., Detroit, Mich.**  
**Hancock Mfg. Co., Charlotte, Mich.**  
**Imperial Brass Mfg. Co., The, Chicago, Ill.**  
**Industrial Instrument Co., The, Foxboro, Mass.**  
**Lunkenheimer Co., The, Cincinnati, O.**  
 ♦ **McEae & Roberts Co., Detroit, Mich.**  
 ♦ **Michigan Lubricator Co., Detroit, Mich.**  
**Moak Machine & Tool Co., Port Huron, Mich.**  
**Morgan Mfg. Co., Inc., Keene, N. H.**  
**National Brass Mfg. Co., Rochester, N. Y.**  
 ♦ **Penberthy Injector Co., Detroit, Mich.**  
**Peninsular Brass Works, Detroit, Mich.**  
 ♦ **Powell Co., The Wm., Cincinnati, O.**  
**Roberts Brass Mfg. Co., The, Detroit, Mich.**  
**Standard Brass Works, Detroit, Mich.**  
 ♦ **Sterling & Skinner Mfg. Co., Detroit, Mich.**  
 ♦ **Swift**—Swift Lubricator Co., Elmira, N. Y.

**CUPS, SOAP.**

- Edwardsville Brass Works, Edwardsville, Ill.**  
**Modern Iron Works, Quincy, Ill.**  
**Nelson, N. O., Mfg. Co., St. Louis, Mo.**  
**Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.**  
**Russell, John M., Mfg. Co., Inc., The, Naugatuck, Conn.**

**CUPS, TANK, RUBBER.****Canfield Rubber Co., Bridgeport, Conn.****CUPS, TURPENTINE.****Mobile Steel Co., Mobile, Ala.****CUPS, VALVE, COMPOSITION.**

- Deviline-Dragon**—Dragon Mfg. Co., Marietta, O.  
**P. C. & S. W., Red Giant, Karns Bow Spring, Parker, Karns Metallic, Black Giant, Parker Canvas, Parker Cup & Specialty Works, Parkers Landing, Pa.**

**CURTAINS, SHOWER BATH.**

- C. & D.**—Coyne & Delany Co., Brooklyn, N. Y.  
**Dry Duck**—C. A. Boyle & Co., Chicago, Ill.  
**Hajoca**—Haines, Jones & Cadbury Co., Philadelphia, Pa.

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 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Sanitary Bath Curtain Mfg. Co., New York, N. Y.  
 Speakman Co., Wilmington, Del.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia.

#### CUPS, VALVE, OIL WELL.

Tulsa Special—The Dragon Mfg. Co., Marietta, O.

#### CURBS, MANHOLE.

American District Steam Co., N. Tonawanda, N. Y.  
 Central Station Steam Co., Detroit, Mich.

#### CURBS, PUMP.

Wyckoff, A., & Son Co., Elmira, N. Y.

#### CUSHIONS, AIR.

I. X. L.—The I. X. L. Pumps & Mfg. Co., Philadelphia, Pa.  
 Lalor Fuel Oil System Co., Baltimore, Md.

#### CUSHIONS, RUBBER, BALL AND COMPRESSION COCK.

♦ Mechanical Rubber Co., Cleveland, Ohio.  
 Perfect—H. O. Canfield Co., Bridgeport, Conn.  
 Sexauer, J. A., Mfg. Co., New York.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### CUSHIONS, WATER.

(To prevent water hammer in range boilers.)

Kelly—Thos. Kelly & Bro., Chicago, Ill.

#### CUSPIDORS.

Aldrich Mfg. Co., Buffalo, N. Y.  
 "Cream City"—Geuder Paeschke & Frey Co., Milwaukee, Wis.  
 Fibrotta—Cordley & Hayes, New York, N. Y.  
 Handlan-Buck Mfg. Co., St. Louis, Mo. (steel and brass).  
 Hoffman & Billings Mfg. Co., Milwaukee, Wis.  
 Lewis, Samuel, New York, N. Y.  
 Mullins Body Corp., Stamping Dept. A, Salem, O.  
 Sweeney, W. H., Mfg. Co., Brooklyn, N. Y.  
 Wilmot—Federal Huber Co., Chicago, Ill.

#### CUT-METERS.

Industrial Instrument Co., Foxboro, Mass.  
 Lightning—McDonnell Odometer Co., Chicago, Ill.  
 O-Z—O. Zerniclow, New York.

#### CUTTERS, ANGLE IRON, BAR AND ROD.

(See also "Shears, Metal Cutting.")

Armstrong-Blum Mfg. Co., Chicago, Ill.  
 Belden's Improved—The Belden Machine Co., New Haven, Conn.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Henderer's, A. L. Sons Co., Wilmington, Del.  
 Hercules—W. M. & C. F. Tucker, Hartford, Conn.  
 Koehring Co., The, Milwaukee, Wis.  
 Illinois Tool Works, Chicago, Ill.  
 Little Blacksmith—J. F. Kidder Mfg. Co., Burlington, Vt.  
 Morgan Construction Co., Worcester, Mass.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Wallace Supply Co., Chicago, Ill.  
 Watson-Stilman Co., New York.

#### CUTTERS, ASPHALT.

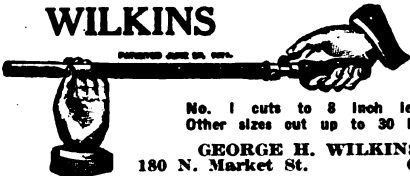
Pollard, Joseph G., Co., Inc., Brooklyn, N. Y.

#### CUTTERS, BOLT AND RIVET.

(See also Clippers.)

Baird Pneumatic Tool Co., Topeka, Kan.  
 Carolus Mfg. Co., Sterling, Ill.  
 Champion Tool Co., Meadville, Pa.  
 ♦ Green River—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Irving Mfg. & Tool Co., New York.  
 Landis Machine Co., Waynesboro, Pa.  
 ♦ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Merriman—The H. B. Brown Co., East Hampton, Conn.  
 Niles-Bement-Pond Co., New York.  
 ♦ O. K.—H. K. Porter, Everett, Mass.  
 Plurality Die—Mummert-Dixon Co., Hanover, Pa.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
 Reliance—The Foote-Burt Co., Cleveland, O.  
 Rivet Cutting Gun Co., Cincinnati, O.  
 "1855"—H. K. Porter, Everett, Mass.

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#### CUTTERS, COAL.

(See "Machinery, Coal Cutting.")

#### CUTTERS, CORE, CUTTING-OFF.

Oliver Machinery Co., Grand Rapids, Mich.  
 Wadsworth Core Machine & Equipment Co., Akron, O.

#### CUTTERS, COUNTERBORE, COUNTERSINK, BACK-FACER AND SPOTFACER.

Production Tool Co. of America, Detroit, Mich.

#### CUTTERS, ELECTRIC WIRE.

♦ The Boston—H. K. Porter, Everett, Mass.

#### CUTTERS, FLUE HOLE.

Adjustable—Scully Steel & Iron Co., Chicago, Ill.  
 ♦ Levejoy Tool Works, Chicago, Ill.  
 Redington, F. B., Co., Chicago, Ill.  
 Scully—Scully Steel & Iron Co., Chicago, Ill.

#### CUTTERS, FLUE AND TUBE.

♦ American—American Steam Packing Co., Boston.  
 Borden Co., The, Warren, O.  
 Celfor—Clark Equipment Co., Buchanan, Mich.  
 Chicago—Chicago Pneumatic Tool Co., New York, N. Y.  
 Faessler's—J. Faessler Mfg. Co., Moberly, Mo.  
 Hayes—Hayes Tool Co., Biddeford, Me.  
 Ideal—Gustav Wiedeke & Co., Dayton, O.  
 Jones Implement Works, Wm., Minneapolis, Minn.  
 Lagonda—The Lagonda Co., Springfield, O.  
 Liberty—Liberty Mfg. Co., Pittsburg, Pa.  
 ♦ Levejoy Tool Works, Chicago, Ill.  
 Redington, American—F. B. Redington Co., Chicago, Ill.  
 Thornton—Scully Steel & Iron Co., Chicago, Ill.  
 Wernicks—M. B. Skinner Co., Chicago, Ill.

#### CUTTERS, GAGE GLASS.

Allen—Newark Brush & Scraper Co., Newark, N. J.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Barrett's Standard—W. L. Barrett, Bristol, Conn.  
 Boskel & Co., Wm., Philadelphia, Pa.  
 ♦ Boston—A. W. Chesterton Co., Boston, Mass.  
 Bullock Mfg. Associates, Springfield, Mass.  
 Champion—The Dicke Tool Co., Downers Grove, Ill.  
 Chicago—Geo. H. Wilkins Co., Chicago, Ill.  
 ♦ Chesterton's—A. W. Chesterton Co., Boston, Mass.  
 Crescent—Crescent Co., Inc., The, Meriden, Conn. (straight and circle).  
 Durax, Robax—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Favorite-Fletcher-Terry Co., The, Forestville, O.  
 Fletcher—Worcester Brush & Scraper Co., Worcester, Mass.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Guillott Metal Gasket & Supply Co., Chicago, Ill.  
 Hall Mfg. Co., New York.  
 ♦ Lonergan, J. E. Co., Philadelphia, Pa.  
 McRae & Roberts Co., The, Detroit, Mich.  
 Newark—Newark Brush & Scraper Co., Newark, N. J.  
 ♦ Powell, Wm. Co., The, Cincinnati, O.  
 ♦ Roberts Brass Mfg. Co., Detroit, Mich.  
 H. A. Rogers Co., New York (Diamond, Eureka, Lightning Model, Yankee, Paragon and Simplex)  
 Wilkins—Geo. H. Wilkins Co., Chicago, Ill.  
 Worcester—Worcester Brush & Scraper Co., Worcester, Mass.

#### CUTTERS, GEAR.

Barber-Colman Co., Rockford, Ill.  
 Becker Milling Machine Co., Hyde Park, Mass.  
 ♦ Browne & Sharpe Mfg. Co., Providence, R. I.  
 Clough's—R. M. Clough, Meriden, Conn.  
 Elco—E. Lagerholm Co., Inc., Chicago, Ill.  
 Fellow Gear Shaper Co., Springfield, Vt.  
 Gould & Eberhardt, Newark, N. J.  
 Illinois Tool Works, Chicago, Ill.  
 Lees-Bradner Co., The, Cleveland, O.  
 M. C.—Meisselbach-Catucci Mfg. Co., Newark, N. J.  
 Michigan Tool Co., Detroit, Mich.



Morse Twist Drill & Machine Co., Bedford, Mass.  
 National, Cleveland—National Tool Co., Cleveland, O.  
 Stahl Gear & Machine Co., Cleveland, O.  
 Thurco—Thurston Mfg. Co., Providence, R. I.  
 Union Twist Drill Co., Athol, Mass.

**CUTTERS, GLASS.**

Crescent—Crescent Co., Inc., The, Meriden, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Irvington Mfg. Co., The, Irvington, N. J.  
 Millers Falls Co., New York.  
 Red Devil—Smith & Hemenway Co., New York.  
 Roberts Brass Mfg. Co., Detroit, Mich.  
 Ruby—Fletcher-Terry Co., The, Bristol, Conn.  
 Newark—Newark Brush & Scraper Co., Newark, N. J.  
 ♦ National—Cleveland National Tool Co., Cleveland, O.  
 New England Novelty Works, Hill, N. H.  
 Elco—E. Lagerholm Co., Inc., Chicago, Ill.  
 Gould & Eberhardt, Newark, N. J.  
 Michigan Tool Co., Detroit, Mich.  
 Stahl Gear & Machine Co., Cleveland, O.

**CUTTERS, GRINDSTONE.**

Robson Mfg. Co., Galesburg, Ill.

**CUTTERS, KEYHOLE.**

Advance Tool Co., Cincinnati, O.  
 Elco—E. Lagerholm Co., Inc., Chicago, Ill.  
 Gale-Sawyer Co., Boston, Mass.  
 South Bend Lathe Works, South Bend, Ind.  
 U. S. High Speed Steel & Tool Corp., New York.  
 Velco Mfg. Co., Inc., The, Greenfield, Mass.  
 Whitney—Whitney Mfg. Co., Hartford, Conn.  
 Woodruff-Scully Jones & Co., Chicago, Ill.

**CUTTERS, LACE LEATHER.**

Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Elliott Patent, L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.  
 ♦ Empire—Greene, Tweed & Co., New York, N. Y.

**CUTTERS, LEAD PIPE.**

Bernz, Otto, Newark, N. J.  
 Johnson, Wm., Newark, N. J.  
 Lord—The C. H. Yonts Co., Meadville, Pa.  
 D. Saunders' Sons, Yonkers, N. Y.  
 Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.

**CUTTERS, MILLING.**

(See also "Mills End.")

Alvord Reamer & Tool Co., Millersburg, Pa.  
 American Twist Drill Co., Detroit, Mich.  
 Ampco-American Machine Products Co., Detroit, Mich.  
 Arnold—H. H. Arnold Co., Rockland, Mass.  
 Barber-Coleman Co., Rockford, Ill.  
 Blanche Co., Inc., L. C., New York, N. Y.  
 Becker Milling Machine Co., The, Hyde Park, Mass.  
 Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
 Bliss, E. C., Mfg. Co., Providence, R. I.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Milling Machine Co., The, Cincinnati, O.  
 ♦ Cleveland Twist Drill Co., The, Cleveland, O.  
 Clough's—R. M. Clough, Meriden, Conn.  
 "Cowles Cutters"—Cowles Tool Co., Cleveland, O.  
 Detroit Reamer & Tool Co., Detroit, Mich.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 Elco Chicago—E. Lagerholm Co., Inc., Chicago, Ill.  
 Essex Tool Works, Newark, N. J.  
 Gale-Sawyer Co., The, Boston, Mass.  
 Goddard Tool Co., Chicago, Ill.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hanscom Cutter Works, Boston, Mass.  
 Hoenscheld Forged Twist Drill & Tool Co., Detroit, Mich.  
 Haynes Stellite Co., New York, N. Y.  
 Illinois Tool Works, Chicago, Ill.  
 Kearney & Trecker Corp., Milwaukee, Wis.  
 Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.  
 Krasberg Mfg. Co., Chicago, Ill.  
 Lovejoy Tool Co., Inc., Springfield, Vt.  
 McCarthy Drill & Tool Co., New York, N. Y.  
 Madison Mfg. Co., Muskegon, Mich.  
 Mergenthaler Co., The, Baltimore, Md.  
 Michigan Tool Co., Detroit, Mich.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 ♦ National, Cleveland—National Tool Co., Cleveland, O.  
 ♦ National Twist Drill & Tool Co., Detroit, Mich.  
 Novo—H. Boker & Co., Inc., New York, N. Y.  
 O. K. Tool Co., Inc., Shelton, Conn.  
 Polk, A. J. & Son, Millersburg, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 Production Tool Co. of America, Detroit, Mich.  
 Scott-Spencer Automatic Tool Co., The, Cincinnati, O.  
 Shields Cutter Co., Cleveland, O.  
 Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.  
 ♦ Standard Tool Co., Cleveland, O.

Sutherland Tool Co., Greenville, Mich. (recut).  
 Taylor-Newbold—Tabor Mfg. Co., Philadelphia, Pa.  
 Thurco—Thurston Mfg. Co., Providence, R. I.  
 Tindell-Morris Co., Eddystone, Pa.  
 Toledo Drill & Tool Co., Toledo, O.  
 ♦ Union Twist Drill Co., Athol, Mass.  
 Up-to-Date Tool Co., Boston, Mass.  
 U. S. High Speed Steel & Tool Corp., New York, N. Y.  
 Windau Tool Co., Cleveland, O.  
 Woodruff—Scully, Jones & Co., Chicago, Ill. (key seat.)  
 Wrigley—Alfred Herbert, Ltd., New York.

**CUTTERS, MITRE.**

Ohl—Geo. A. Ohl & Co., Newark, N. J.

**CUTTERS, PINION & WHEEL.**

Wade American Tool Co., Waltham, Mass.

**CUTTERS, PIPE.**

(See also "Machines, Pipe Cutting.")

Armstrong Mfg. Co., Bridgeport, Conn.  
 Beaver Square End—The Borden Co., Warren, O.  
 Barnes Pattern—Hollands Mfg. Co., Erie, Pa.  
 Barnes Pattern—The Erie Tool Works, Erie, Pa.  
 Barnes Genuine—The Barnes Tool Co., New Haven.  
 Barnes Pat.—Clipper Tool Co., Buffalo, N. Y.  
 Barnes Pattern—Collmer Bros., South Bend, Ind.  
 ♦ Barnes Pattern—Reed Mfg. Co., Erie, Pa.  
 Behringer, Edward A., Inc., New York, N. Y.  
 B. & K.—Bignall & Keeler Machine Works, Edwardsville, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Crown—Crown Die & Tool Co., Chicago, Ill.  
 Eck—Wm. F. Crockett Co., Chicago, Ill.  
 ♦ G. T. C.—Greenfield Tire & Die Corp., Greenfield, Mass.  
 ♦ Hollands—Hollands Mfg. Co., Erie, Pa.  
 Jarecki—Jarecki Mfg. Co., Erie, Pa.  
 ♦ Murchey Machine & Tool Co., Detroit, Mich.  
 Nye—Nye Tool & Machine Wks., Chicago, Ill.  
 Plumbers' Specialty Mfg. Co., St. Louis, Mo.  
 Saunders'—D. Saunders' Sons, Inc., Yonkers, N. Y.  
 Saunders Pat.—The Erie Tool Works, Erie, Pa.  
 ♦ Saunders Pat.—Reed Mfg. Co., Erie, Pa.  
 Saunders Pat.—Barnes Tool Co., New Haven, Conn.  
 Saunders Pat.—Clipper Tool Co., Buffalo, N. Y.  
 Saunders Pat.—Collmer Bros., South Bend, Ind.  
 ♦ Saunders Pat.—Hollands Mfg. Co., Erie, Pa.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
 Steel Tube Co. of America, Chicago, Ill.  
 ♦ Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O.  
 ♦ Trimco—Trimont Mfg. Co., Roxbury, Mass.  
 Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn. (four-wheel).  
 ♦ Vosper—Toledo Pipe Threading Machine Co., Toledo, O.  
 Wells—F. E. Wells & Sons Co., Greenfield, Mass.  
 Woodward-Wanger Co., Philadelphia, Pa.

**CUTTERS, PIPE, WROUGHT IRON AND SOIL.**

Anderson—Tucker Tool & Machine Co., New York.  
 ♦ Beaver—The Borden Co., Warren, O.  
 Easy, Soil, J. R. S.—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.  
 Hall—Walworth Mfg. Co., Boston, Mass.  
 ♦ Rodefald—Rodefald Mfg. Co., Richmond, Ind.  
 Stanwood—Rumsey & Co., Ltd., Seneca Falls, N. Y.  
 Waterworks Equipment Co., New York, N. Y.

**CUTTERS, PIPE, RATCHET.**

♦ Beaver—The Borden Co., Warren, O.  
 Toledo Pipe Threading Machine Co., Toledo, Ohio.

**CUTTERS, ROOT (SEWER CLEANING).**

Vulcan Tool & Mfg. Co., The, Quincy, Mass.

**CUTTERS AND SHREDDERS, ROTARY.**

Alsing—J. R. Alsing Engineering Co., New York.  
 Beach-Russ Co., New York, N. Y.

**CUTTERS, SCREW SLOTTING.**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Clough, R. M., Tolland, Conn.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Illinois Tool Works, Chicago, Ill.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.

**CUTTERS, SHEET METAL SHAPERS.**

Grays—W. J. Savage Co., Inc., Knoxville, Tenn.

**CUTTERS, SLITTING MACHINE.**

Tinker, F., & Sons Co., Pittsburgh, Pa.

**CUTTERS, SPEZ.**

Adams—The Adams Co., Dubuque, Ia.  
 Bliss Co., E. W. Brooklyn, N. Y.  
 Busch Co., J. C., Milwaukee, Wis.

Busch-Hanna Engineering Works, Chicago, Ill.  
 Coleman—Foundry Equipment Co., Cleveland, O.  
 Merriman—Meriden Press & Drop Co., The, Meriden, Conn.  
 Milwaukee—Hanna Engineering Works, Chicago, Ill.  
 Northern Engineering Works, Detroit, Mich.  
 Paxson, J. W., Co., Philadelphia, Pa.  
 Shuster, B. F., Co., New Haven, Conn.  
 Tessmer Machine & Tool Co., Detroit, Mich.  
 Toledo Machine & Tool Co., Toledo, O.  
 V. & O.—The V. & O. Press Co., Glendale, L. I., N. Y.  
 Waterbury-Farrell Foundry & Machine Co., Waterbury, Conn.

#### CUTTERS, STORAGE BATTERY.

◆ Porter, H. K., Everett, Mass.

#### CUTTERS, SURFACE.

Production Tool Co. of America, Detroit, Mich.

#### CUTTERS, TWINE.

Welch, T. F., & Co., Boston, Mass.

#### CUTTERS, WASHER AND GASKET.

Barnz, Otto, Newark, N. J.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Briggs—Piley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Century—James McCrea & Co., Chicago, Ill.  
 Century—Mound Tool Co., St. Louis, Mo.  
 ◆ Detroit Twist Drill Co., Detroit, Mich.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Eagle—Charles I. Allen, Pequabuck, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 ◆ Johnson, Wm., Newark, N. J.  
 ◆ Simonds Mfg. Co., Fitchburg, Mass.  
 Smith's—Otis A. Smith, Rockfall, Conn.  
 Springfield—Shawver Co., The, Springfield, Ohio.  
 Tower & Lyon Co., New York, N. Y.

#### CUTTERS, WIRE.

Carew—M. W. Robinson Co., New York, N. Y.  
 Carolus Mfg. Co., Sterling, Ill.  
 Manco—Mann Corporation, Kankakee, Ill.  
 H. D. Smith Co., Plantsville, Conn.

#### CUTTERS, WOODEN PLUG.

Forest City—Forest City Bit & Tool Co., Rockford, Ill.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.

#### CUTTERS, WOODWORKING.

Concave—Morris L. Orum, Philadelphia, Pa.  
 Shimer & Sons, Samuel J., Milton, Pa.  
 Wood—Morris Wood & Sons, Chicago, Ill.

#### CYLINDERS, AMMONIA.

National Tube Co., Pittsburgh, Pa.

#### CYLINDERS, ANNEALING.

Scannell Boiler Works, Lowell, Mass.

#### CYLINDERS, COMPRESSED AIR OR GAS.

(See also "Tanks, Steel.")

Cleveland Crane & Engineering Co., Wickliffe, O.  
 Columbiana Boiler Co., Columbiana, O.  
 Hackney—Federal Pressed Steel Tank Co., Milwaukee, Wis.  
 Hall Steam Pump Co., Pittsburg, Pa.  
 Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 M. E. C.—Manufacturers Equipment Co., Chicago, Ill.  
 National & Shelby—National Tube Co., Pittsburgh, Pa.  
 Sealife, Wm. B., & Sons Co., Pittsburg, Pa.

#### CYLINDERS, CREOSOTING.

Columbiana Boiler Co., Columbiana, O.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Petroleum Iron Works Co., The, Sharon, Pa.  
 Struthers-Wells Co., Warren, Pa.

#### CYLINDERS, GLASS, OIL CUP AND LUBRICATOR

Doerr Glass Company, Vineland, N. J.

#### CYLINDERS, LAUNDRY MANGLE.

Black-Clawson Co., Hamilton, O.

#### CYLINDERS, PUMP OR WELL.

Aermotor Co., Chicago, Ill.  
 American—The American Well Works, Aurora, Ill.  
 Axtell—Axtell Co., The, Ft. Worth, Tex.  
 Cedar Rapids—Cedar Rapids Pump Co., Cedar Rapids, Challenge Co., Batavia, Ill.  
 Cook, A. D., Inc., Lawrenceburg, Ind.  
 Corcoran—A. J. Corcoran, Inc., Jersey City, N. J.  
 Crestline Mfg. Co., Crestline, Ohio.

◆ Deming—The Deming Co., Salem, Ohio.  
 Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.  
 D—Dempster Mfg. & Supply Co., Des Moines, Iowa.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Downie—Keystone Driller Co., Beaver Falls, Pa.  
 Duplex—Duplex Mfg. Co., Superior, Wis.  
 Enterprise—D. A. Hinman & Co., Sandwich, Ill.  
 Erb, W. B., & Co., Chicago, Ill.  
 Eureka—Chicago Well Supply Co., Chicago.  
 Eureka, Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.  
 Hayes—Hayes Pump & Planter Co., Galva, Ill.  
 Hazen Mfg. Co., Hudson, Mich.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Hough Mfg. Co., The, Chas. N., Franklin, Pa.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Kerrihard Co., Red Oak, Ia.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Midland—The Midland Brass Works, Fort Worth, Tex.  
 Midwest Engine Co., Indianapolis, Ind.  
 Monitor—Baker Mfg. Co., Evansville, Wis.  
 Myers, F. E., & Bro., Ashland, Ohio.  
 National—National Tube Co., Pittsburgh, Pa.  
 Nelson Mfg. & Supply Co., Hutchinson, Kan.  
 Never Fail—Red Jacket Mfg. Co., Davenport, Ia.  
 Oshkosh—Davis-Hansen Pump Co., Oshkosh, Wis.  
 Ottumwa Moline Engine & Pump Co., Ottumwa, Ia.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.  
 Peerless—Ottumwa-Moline Engine Pump Co., Ottumwa, Iowa.  
 Peters—Peters Pump Co., Kewanee, Ill.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Sealife & Sons Co., Wm. B., Pittsburg, Pa.  
 So-Easy-To-Fix—Red Jacket Mfg. Co., Davenport, Ia.  
 Star—Woodmanse Mfg. Co., Freeport, Ill.  
 Texas Mfg. Co., Ft. Worth, Tex.  
 Trahern Pump Div., Geo. D. Roper Corp., The, Rockford, Ill.  
 U. S.—U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Warlo—Ward-Love Pump Corporation, Rockford, Ill.

#### CYLINDERS, VULCANIZING.

Columbiana Boiler Co., Columbiana, O.

#### DEAN CONTROL, VALVE OPERATING.

Cutler-Hammer Co., The, Milwaukee, Wis.  
 Payne Dean Limited, New York, N. Y.

#### DEEP WELL RIGS, PORTABLE.

Keystone—Keystone Driller Co., Beaver Falls, Pa.

#### DEHUMIDIFIERS.

Carrier Air Conditioning Company of America, Buffalo, N. Y.  
 Webster—Warren Webster Co., Camden, N. J.

#### DEODORIZERS.

(See also "Disinfectors.")

Aerzonators—U. S. Sanitary Specialties Co., Chicago, Ill.  
 West—West Disinfecting Co., Inc., New York, N. Y.

#### DERRICKS AND DERRICK FITTINGS.

Allen Engineering Co., Philadelphia, Pa.  
 American—American Hoist & Derrick Co., St. Paul, Minn.  
 Anderson & Co., Ltd., Geo., Newark, N. J.  
 Antigo—International Hoist Co., Antigo, Wis.  
 Bedford Foundry & Machine Co., Bedford, Ind.  
 Buffalo Contractors' Plant Corp., Buffalo, N. Y.  
 Burke, P. F., Boston, Mass.  
 Carlin, John H. Machine Co., Pittsburgh, Pa.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Clyde Iron Works, Inc., Duluth, Minn.  
 Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
 Flory Mfg. Co., S., Bangor, Pa.  
 Insley Mfg. Co., Indianapolis, Ind.  
 Lake Shore Engine Works, Marquette, Mich.  
 Lane Mfg. Co., Montpelier, Vt.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
 Maine Electric Co., Portland, Me.  
 Melco—Maine Electric Co., Portland, Me.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 National Equipment Co., Chicago, Ill.  
 National Hoisting Engine Co., Harrison, N. J.  
 New Jersey Foundry & Machine Co., New York, N. Y.  
 Parker—Parker, S. E., Chicago, Ill.  
 Pittsburg Block & Mfg. Co., Pittsburg, Pa.  
 Samsco—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Sasgen Derrick Co., The, Chicago, Ill.  
 Shannon—J. Jacob Shannon & Co., Philadelphia, Pa. (Travelers.)  
 Smith—The T. L. Smith Co., Milwaukee, Wis.  
 Superior Iron Works Co., Superior, Wis.  
 Taylor—Taylor Portable Steel Derrick Co., Chicago, Ill.  
 Terry, Edward F., Mfg. Co., New York, N. Y.

Union Elevator & Machine Co., Chicago, Ill.  
 Vulcan Tool Mfg. Co., The, Quincy, Mass. (Fittings only.)  
 Wheeler & Twine, Brooklyn, N. Y.

#### DERRICKS, OR TRIPODS, PORTABLE.

Pollard—Joseph G. Pollard, Brooklyn, N. Y. (pipe).  
 Speidel, J. G., Reading, Pa.

#### DERRICKS, TURNING GEARS, OR SLEWING ENGINES.

Lane Mfg. Co., Montpelier, Vt.

#### DESKS, FACTORY.

Barshal Co., The, Cleveland, Ohio.  
 Lyon Metallic Mfg. Co., Aurora, Ill.

#### DESTROYERS, SOOT.

Carbonoid—Weldm Products Co., Indianapolis, Ind. (chimney sweep and flue fire extinguisher).  
 Cooper's—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
 Economy—Economy Scale Remover Co., Chicago Heights, Ill.  
 Karbonite—Utility Products Co., Omaha, Neb.

#### DETECTORS, COMMON AND FLOW.

Lewis—Lewis Steam Specialty & Valve Co., Philadelphia, Pa.

#### DETECTORS, FIRE.

Ideal—Ideal Fire Detector Co., Newark, N. J.

#### DETECTORS, GAS, FOR MINES, SHIPS, ETC.

Burrell—Mine Safety Appliance Co., Pittsburgh, Pa.

#### DETONATORS, ELECTRIC.

◆ DuPont, E. I. De Nemours & Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

#### DEVICES, COKE HANDLING.

Foundry Appliance Co., Newark, N. J.

#### DEVICES, GRINDSTONE TRUING.

Athol Machine & Foundry Co., Athol, Mass.  
 Hoppen—J. E. Hoppen & Sons, Belleville, N. J.  
 Oliver—Oliver Machinery Co., Grand Rapids, Mich.

#### DEVICES, INDICATING AND REGISTERING, HYDRAULIC.

Bristol's—Bristol Co., The, Waterbury, Conn.  
 Simplex—Simplex Valve & Meter Co., Philadelphia, Pa.

#### DEVICES, OILING.

(See "Cups, Oil," "Lubricators," "Oilers," and "Systems. Oiling.")

#### DIAMONDS, FOR MECHANICAL USES.

American Diamond Rock Drill Co., New York, N. Y.  
 D. Dessau, New York, N. Y.  
 Joyce-Koebel Co., Inc., New York, N. Y.  
 Wheel Truing Tool Co., Detroit, Mich.

#### DIAPHRAGMS, METAL.

Glenn Mfg. Co., St. Charles, Ill.  
 Indestructible—U. S. Indestructible Gasket Co., New York, N. Y.  
 Locke Regulator Co., Salem, Mass.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 U. S. Indestructible Gasket Co., New York, N. Y.

#### DIAPHRAGMS, RUBBER.

Barnes Mfg. Co., The, Mansfield, O.  
 Boston Belting Corp., Boston, Mass.  
 Buckley Rubber Co., J. W., New York, N. Y.  
 Canfield Rubber Co., The, Bridgeport, Conn. (hopper, closet and steam).  
 ◆ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Consolidated Rubber Co., Trenton, N. J.  
 Diamond Rubber Co., The, Akron, O.  
 Dominion Asbestos and Rubber Corp., New York.  
 ◆ Goodrich, B. F., Rubber Co., The, Akron, O.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Hewitt—Hewitt Rubber Co., Buffalo, N. Y.  
 ◆ Indestructene—Combination Rubber Mfg. Co., Bloomfield, N. J.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Locke Regulator Co., Salem, Mass.  
 ◆ Low, Loud, Edison—United States Rubber Co., Mechanical Goods Div., New York.  
 ◆ New York Belting & Packing Co., New York, N. Y.  
 ◆ Our Extra—New York Rubber Co., New York, N. Y.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Revere Rubber Co., Boston, Mass.  
 Star—Boston & Lockport Block Co., Boston, Mass.  
 Tribune—Continental Rubber Works, Erie, Pa.

◆ United & Globe Rubber Co., Trenton, N. J.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### DIE SINKING OUTFITS.

Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Stow Mfg. Co., Binghamton, N. Y.

#### DIES, AUTOMATIC OPENING.

(See also "Heads, Die.")

Baird Machine Co., The, Bridgeport, Conn.  
 Bickford Machine Co., Greenfield, Mass.  
 Coventry—Alfred Herbert Ltd., New York.  
 Errington, F. A., New York, N. Y.  
 Geometric Tool Co., New Haven, Conn.  
 ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hartness—Jones & Lamson Machine Co., Springfield, Vt.  
 Ideal—Ideal Foundry & Machinery Co., Beaver Falls, Pa.  
 Landis Machine Co., Inc., Waynesboro, Pa.  
 ◆ Murchey Machine & Tool Co., Detroit, Mich.  
 ◆ Namco—The National Acme Co., Cleveland, O.  
 Nelson Tool Co., Inc., New York, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 Wallace—Modern Tool Co., Erie, Pa.  
 ◆ Wells Bros. Co., Greenfield, Mass.

#### DIES, BENDING AND TRIMMING.

Hartford Drop Forge Co., Hartford, Conn.  
 Nelson Tool Co., Inc., New York, N. Y.

#### DIES, BLANKING.

Grammes, L. F. & Sons, Allentown, Pa.  
 Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
 Modern Tool Co., Erie, Pa.  
 Nelson Tool Co., Inc., New York, N. Y.  
 West Michigan Machine & Tool Co., Ltd., Grand Rapids, Mich.

#### DIES, BOILERMAKERS'

(See "Dies, Screw Cutting.")

#### DIES, BRASS PRINTING.

Pittsburg Stamp Co., Inc., Pittsburg, Pa.

#### DIES, FOR BRASS TUBING.

Boston Brass Co., Boston, Mass.  
 Hercules—F. E. Wells & Son Co., Greenfield, Mass.  
 Pratt & Whitney Co., Hartford, Conn.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 ◆ Walworth Mfg. Co., Boston, Mass.

#### DIES, CUTTING AND FORMING.

Adriance Machine Works, Brooklyn.  
 Bliss Co., E. W., Brooklyn.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Fox Chase Engineering Co., Inc., Philadelphia, Pa.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Gardam, Wm. & Son, Inc., New York, N. Y.  
 ◆ Hoggson & Pettis Mfg. Co., New Haven, Conn.  
 Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
 Nelson Tool Co., Inc., New York, N. Y.  
 Pulte-Korreck Machine Co., Grand Rapids, Mich.

#### DIES, CUTTING AND MARNING.

◆ Hoggson & Pettis Mfg. Co., The, New Haven, Conn.  
 Matthews & Co., Jas. H., Pittsburg, Pa.

#### DIES, DROP FORGING.

Bliss, E. W., Co., Brooklyn, N. Y.  
 Crucible Steel Co. of America, Pittsburgh, Pa.  
 Champion Machine & Forging Co., Cleveland, O.  
 Hartford Drop Forge Co., Hartford, Conn.  
 Inland Machine Works, St. Louis, Mo.  
 Keller Mechanical Engraving Co., Brooklyn, N. Y.

#### DIES, PIPE THREADING.

Armstrong Mfg. Co., The, Bridgeport, Conn.  
 ◆ Beaver Easy Worker—Worden Co., Warren, O.  
 Brubaker, W. L. & Bros., Millersburg, Pa.  
 Buckeye—The Hart Mfg. Co., Cleveland, O.  
 Bulldog—The Oster Mfg. Co., Cleveland, O.  
 Butterfield & Co., Inc., Derby Line, Vt.  
 Crane Valve Co., Bridgeport, Conn.  
 Crown—Crown Die & Tool Co., Chicago, Ill.  
 ◆ Curtis & Curtis Co., The, Bridgeport, Conn.  
 Duplex—The Hart Mfg. Co., Cleveland, O.  
 Eagle—American Tap & Die Co., Greenfield, Mass.  
 Erie—Erie Tool Works, The, Erie, Pa.  
 Handy—The Handy Mfg. Co., Bridgeport, Conn.  
 Hercules—F. E. Wells & Son Co., Greenfield, Mass.  
 ◆ Hollands—Hollands Mfg. Co., The, Erie, Pa.  
 Ideal—Ideal Foundry & Machinery Co., Beaver Falls, Pa.  
 Jarecki Mfg. Co., Erie, Pa.

- Landis Machine Co., Waynesboro, O.  
 Modern—Modern Tool Co., Erie, Pa.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 ♦ National Acme Mfg. Co., The, Cleveland, O.  
 Nye—Nye Tool & Machine Works, Chicago, Ill.  
 Pipe Machinery Co., The, Cleveland, O. (special).  
 Polk & Son, A. J., Millersburg, Pa.  
 Q & E—Reed Mfg. Co., Pa.  
 Reece—The E. F. Reece Co., Greenfield, Mass.  
 Reliable—Conant & Donelson Co., Conway, Mass.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 Saunders—D. Saunders Sons, Inc., Yonkers, N. Y.  
 Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.  
 The Oster Mfg. Co., Cleveland, Ohio.  
 Thistle—Winter Bros. Co., Wrentham, Mass.  
 ♦ Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O.  
 Union Drop Forging Co., Chicago, Ill.  
 ♦ Walworth—Walworth Mfg. Co., Boston, Mass.  
 Webster—Perks Tool Co., Springfield, O. (spring).

#### DIES, RIVET MACHINE, GRIPPING AND HEADING.

New Process—Geo. F. Marchant Co., Chicago, Ill.

#### DIES, SCREW CUTTING, ADJUSTABLE, BOILER-MAKERS', ETC.

- Acme, Adamantine, Eagle—American Tap & Die Co., Greenfield, Mass.  
 Armstrong Mfg. Co., Bridgeport, Conn.  
 ♦ Bay State—Bay State Tap & Die Co., Mansfield, Mass.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 Carpenter Tap & Die Co., J. M., Pawtucket, R. I.  
 Common Sense—W. L. Brubaker & Bros., Millersburg, Pa.  
 Errington—Errington Mechanical Laboratory, New York, N. Y. (auto-opening).  
 ♦ Green River—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hardinge Bros., Inc., Chicago, Ill.  
 Hercules—F. E. Wells & Son Co., Greenfield, Mass.  
 Ideal Foundry & Machinery Co., Beaver Falls, Pa.  
 ♦ Lightning Little Giant—Greenfield Tap & Die Corp., Greenville, Mass.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Murchey Machine & Tool Co., Detroit, Mich.  
 ♦ National Acme Mfg. Co., The, Cleveland, O.  
 Oswego Tool Co., The, Oswego, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 ♦ Reed Mfg. Co., Erie, Pa.  
 Reliance—The Foote-Burt Co., Cleveland, O.  
 Russell Quality—Russell Mfg. Co., The, Greenfield, Mass.  
 Smart—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Smith Patent—S. W. Card Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.  
 Thistle—Winter Bros. Co., Wrentham, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Webster & Perks Tool Co., Springfield, O.  
 Winter Bros. Co., Wrentham, Mass.

#### DIES, SHEET METAL WORKING.

(See also "Presses and Dies.")

- Adriance Machine Works, Brooklyn, N. Y.  
 American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Columbus Die, Tool & Machine Co., Columbus, O.  
 Ferracute Machine Co., Bridgeton, N. J.  
 ♦ Gem Mfg. Co., Pittsburgh, Pa.  
 Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
 Globe Machine & Stamping Co., Cleveland, Ohio.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Keller Mechanical Engraving Co., Brooklyn, N. Y.  
 Krasberg Mfg. Co., Chicago, Ill.  
 Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
 Nelson Tool Co., Inc., New York, N. Y.  
 Myers, W. F., Co., Inc., Bedford, Ind.  
 Pulte-Korreck Machine Co., Grand Rapids, Mich.  
 Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Sloan & Chace Mfg. Co., Newark, N. J.  
 Stoll, D. H. Co., Buffalo, N. Y.  
 Swaine, F. J., Mfg. Co., St. Louis, Mo.  
 Taylor, Shantz Co., Rochester, N. Y.  
 Toledo—The Toledo Machine & Tool Co., Toledo, O.  
 Up-to-Date Tool Co., Boston, Mass.  
 V & O—The V & O Press Co., Brooklyn, N. Y.  
 Waltham Machine Works, Waltham, Mass.  
 West Michigan Machine & Tool Co., Ltd., Grand Rapids, Mich.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass.

#### DIES, SPRING.

- ♦ Bay State Tap and Die Co., Mansfield, Mass.  
 Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.  
 ♦ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Namco—The National Acme Co., Cleveland, O.

#### DIES, STAY BOLT.

- Lassiter—Modern Tool Co., Erie, Pa.

#### DIES, SUB-PRESS.

- Pratt & Whitney Co., Hartford, Conn.  
 Nelson Tool Co., Inc., New York, N. Y.  
 Waltham Machine Works, Waltham, Mass.

#### DIES, THREADING, ENGLISH OR METRIC FIXTURES

- ♦ Bay State—Bay State Tap and Die Co., Mansfield, Mass.  
 Hardinge Bros., Inc., Chicago, Ill.

#### DIES, WIRE DRAWING.

- Diamond Tool & Die Works, Hartford, Conn.  
 Waterbury Wire Die Co., Waterbury, Conn.

#### DIFFUSERS, AIR, INDIRECT HEATING.

- Camelback, Aisle Hoods, Mushroom—Knowles Mushroom Ventilator Co., New York, N. Y.  
 Shipp, C. C., & Co., Indianapolis, Ind.

#### DIFFUSERS, MUSHROOM

- Aisle Hoods—Knowles Mushroom Ventilator Co., New York.  
 Kaufman Engineering Co., St. Louis, Mo.

#### DIGESTERS.

- Adamite and Amalgite—Herman Behr & Co., Inc., New York, N. Y.  
 Bartlett & Snow Co., Cleveland, O.  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Devine Co., J. P., Buffalo, N. Y.  
 Hoover, Owens, Rentschler Co., Hamilton, O.  
 Kellogg, M. W., The, New York.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Kutztown Foundry & Machine Co., Philadelphia.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Munroe, R., & Son Mfg. Corp., Pittsburgh, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Porcupine Boiler Co., Bridgeport, Conn.  
 Reeves Bros., Alliance, Ohio.  
 Riter-Conley Mfg. Co., Pittsburgh, Pa.  
 Scannell Boiler Works, Lowell, Mass.  
 Struthers-Wells Co., Warren, Pa.  
 Western Gas Construction Co., Fort Wayne, Ind.

#### DISCO, ABRASIVE.

- Adamite—Herman Behr & Co., Inc., New York, N. Y.  
 Boxite, Crystox—Charles H. Besly & Co., Chicago, Ill.  
 GIA—Gardner Machine Co., Beloit, Wis.  
 Sterling—Best, L. Co., New York.

#### DISCO, RIBB.

- Canfield, The H. O., Co., Bridgeport, Conn.  
 Goetz Gasket & Packing Co., New Brunswick, N. J.  
 ♦ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ New York Belting & Packing Co., Ltd., New York.  
 United—United Brass Mfg. Co., Cleveland, O.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### DISCS, BRASS AND COPPER.

- Connecticut Brass Corp., Waterbury, Conn.  
 Dallas Brass & Copper Co., Chicago, Ill.  
 Phoenix Specialty Mfg. Co., New York.

#### DISCO, FRICTION, HIGH SPEED.

- Hunter Saw & Machine Co., Pittsburgh, Pa.  
 ♦ Thermoid Rubber Co., Trenton, N. J.

#### DISCO, GRINDING.

- Adamite—Herman Behr & Co., Inc., New York, N. Y.  
 Besly—Charles H. Besly & Co., Chicago, Ill.  
 Brooklyn, Caribcon, Empire, Ruby—Herman Behr & Co., Inc., New York, N. Y.  
 Wausite—Wausau Abrasives Co., Chicago, Ill.

#### DISCS, LEATHER

- ♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 Leather Parts Co., Indianapolis, Ind.

#### DISCS, TANK AND PLUNGER.

- Canfield Rubber Co., The, Bridgeport, Conn.

#### DISCO, VALVE.

- Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Belknap Mfg. Co., The, Bridgeport, Conn.  
 Bell—Estate of Andrew Bell, Newark, N. J.

- Canfield Rubber Co., The, Bridgeport, Conn.**  
**Canfield, The H. O. Co., Bridgeport, Conn.**  
**Chicago Rawhide Mfg. Co., Chicago, Ill.**  
 ♦ **Composite—The Wm. Powell Co., Cincinnati, O.**  
**Darcoid—Dominion Asbestos and Rubber Corp., New York.**  
 ♦ **Diamond Rubber Co., Inc., Akron, O.**  
 ♦ **Dickvalve—R. & J. Dick Co., Inc., Passaic, N. J.**  
**Draper Mfg. Co., The, Port Huron, Mich.**  
**Durabla—Durabla Mfg. Co., New York, N. Y.**  
**Elkhart Rubber Works, Elkhart, Ind.**  
**Fleur de Lis—The Plouff Co., Boston, Mass.**  
**Glauber Brass Mfg. Co., Cleveland, O.**  
**Goetze Gasket & Packing Co., New York, N. Y.**  
 ♦ **Goodrich—B. F. Goodrich Co., Akron, O.**  
**Haydenville Co., The, Haydenville, Mass.**  
**Helland's Graphite—Geo. W. Helland, New York.**  
**Indestructible—U. S. Indestructible Gasket Co., New York, N. Y.**  
 ♦ **Jenkins Bros.—Jenkins Bros., New York, N. Y.**  
**J. Johnson—Osgood Sayen, Philadelphia, Pa.**  
**Johns-Pratt Co., Hartford, Conn.**  
 ♦ **Kelly & Jones Co., The, Greensburg, Pa.**  
**La Favorite Rubber Mfg. Co., Paterson, N. J.**  
 ♦ **Meruco, Cleveland, Buckeye—United States Rubber Co., Mechanical Goods Div., New York.**  
**Metallo—Metallo Gasket Co., New Brunswick, N. J.**  
**New York Belting & Packing Co., New York.**  
**National Tube Co., Pittsburgh, Pa.**  
**Nichols Perfection—S. R. Drum Mfg. Co., Chicago, Ill.**  
**Norwalk Mfg. Co., East Norwalk, Conn.**  
 ♦ **O. L. Co.—Ohio Injector Co., Wadsworth, O.**  
**Pittsburgh Valve & Fittings Co., Barberton, O.**  
 ♦ **Powell, Wm., Co., The, Cincinnati, O.**  
 ♦ **Scioto—Cincinnati Rubber Mfg. Co., Cincinnati, O.**  
**Skinner—M. B. Skinner Co., Chicago, Ill.**  
**Steam Economy Co., Chicago, Ill.**  
**Tuf—John S. Bushnell & Co., New York, N. Y.**  
**U. S. Indestructible Gasket Co., New York, N. Y.**  
 ♦ **Walworth Mfg. Co., Boston, Mass.**  
**Western Rubber Co., Goshen, Ind.**  
 ♦ **White Star—The Wm. Powell Co., Cincinnati, O.**  
**Wolverine Brass Works, Grand Rapids, Mich.**  
**Woodward-Wanger Co., Philadelphia.**

**DISHES, SOAP, PORCELAIN.**

(See Fittings, Bathroom.)

- Bay Ridge Specialty Co., New York.**  
**Hutter, Karl, Inc., New York, N. Y.**  
**Sanitary Specialties Co., Philadelphia, Pa.**

**DISHES, SOAP, RUBBER.**

- Colemans—Allan J. Coleman, Chicago, Ill.**

**DISINFECTANTS AND DISINFECTORS.**

- Aerlator—Standardized Products Co., Chicago, Ill.**  
**Atlas—Atlas Preservative Co. of America, Inc., New York.**  
**Automatic Disinfectant Co., Memphis, Tenn. (water closet).**  
**Bobrick Chemical Co., Los Angeles, Calif.**  
**Calkins—Rochester Germicide Co., Rochester, N. Y.**  
**Coro-Noleum—West Disinfecting Co., New York, N. Y.**  
**Detergent—Geo. Callahan & Co., New York, N. Y.**  
**Garnet, Geo. H., Co., Allentown, Pa.**  
**Gerson-Stewart Corp., The, Cleveland, O. Trade names—Dixie Pino, Hykotar, Super Strength.**  
**Great Western Oil Co., The, Cleveland, O.**  
**Hydro Cleaner—Plunkett Chemical Co., Chicago.**  
**Hydro-Pneumatic Disinfecting Co., New York.**  
**Hygienator—West Disinfecting Co., Inc., New York.**  
**Ideal—Ideal Chemical Co., Indianapolis, Ind.**  
**McVicker, Wm. B., Co., New York, N. Y.**  
**Paragon—The Campbell-Hausfeld Co., Harrison, O.**  
**Phenyle—American Agramid Corp., Flushing, N. Y.**  
**Pine Odor, Disinfectone—W. D. Carpenter Co., Syracuse, N. Y.**  
**Protectus—West Disinfecting Co., Inc., New York.**  
**Protex—W. B. McVicker Co., Brooklyn, N. Y.**  
**Pyxol—Barrett Mfg. Co., New York, N. Y.**  
**Shield Brand—Rochester Germicide Co., Rochester, N. Y.**  
**Standard—Standard Oil Co. of New York, New York.**  
**20th Century—Robertson, Theo. B., Products Co., Inc., Chicago, Ill.**  
**Voelkner & Harry Mfg. Co., Detroit.**  
**West—West Disinfecting Co., Inc., New York.**  
**Zenoleum—Zenner Products Co., Detroit.**

**DISINFECTORS, STEAM PRESSURE.**

- American Kinyoun, Francis—American Sterilizer Co., Erie, Pa.**

**DISSOLVER, RUST.**

- Peter A. Frasse, Inc., New York, N. Y.**  
**Rust Eater—Kemoshyne Products, Inc., New York, N. Y.**  
**Tasgon—Polygon Products Co., Boston, Mass.**

**DISTRIBUTORS, FUEL.**

- Lamy, A., & Son, Elizabeth, N. J.**

**ARMSTRONG**Drop Forged Steel  
LATHE DOGSBent on Straight Tail—Double or Single  
Screw. Square or Headless Screw— $\frac{1}{4}$ "  
to 8" capacity.

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326 N. Francisco Ave., Chicago, "The Tool Holder People."

**DOGS, CHAIN.**

- Krein Mfg. Co., The, Wapakoneta, O.**

**DOGS, LATHER.**

- ♦ **Armstrong—Armstrong Bros. Tool Co., Chicago, Ill. (Drop forged steel.)**  
**Besly, Chas. H., & Co., Chicago, Ill.**  
 ♦ **Billings—Billings & Spencer Co., Hartford, Conn.**  
**Bonney Forge & Tool Works, Inc., Allentown, Pa.**  
 ♦ **Champion—Western Tool & Mfg. Co., Springfield, O.**  
**C. K. Tool Co., Inc., Shelton, Conn.**  
**Efficiency—Efficiency Device Corp., New York, N. Y.**  
**Hill—The Ready Tool Co., Bridgeport, Conn.**  
**Indispensable—Bonney Forge & Tool Works, Allentown, Pa.**  
 ♦ **Le Count's—Collmer Bros., South Bend, Ind.**  
**Le Count—W. G. Le Count Tool Works, South Norwalk, Conn.**  
**Lutz—Lutz Co., Inc., Philadelphia, Pa.**  
 ♦ **Mark—Mark Mfg. Co., Chicago, Ill.**  
**Michaud, Elmer J., Willimantic, Conn.**  
**Niles-Bement-Pond Co., New York, N. Y.**  
**Phoenix Hardware Mfg. Co., Buffalo, N. Y.**  
**Safety—Elmer J. Michaud, Willimantic, Conn.**  
**Safety—West Steel Casting Co., The, Cleveland, O.**  
**Springfield Machine Tool Co., Springfield, O.**  
**Union Tool Co., Orange, Mass.**  
 ♦ **Vulcan-Safety—J. H. Williams & Co., Brooklyn, N. Y.**  
**Welch, T. F., & Co., Boston, Mass.**

**DOGS, LATHER CLAMP.**

- ♦ **Armstrong Bros. Tool Co., Chicago, Ill.**  
 ♦ **B. & S.—The Billings & Spencer Co., Hartford, Conn.**  
**Hill—The Ready Tool Co., Bridgeport, Conn.**  
**Le Count—W. G. Le Count Tool Works, South Norwalk, Conn.**  
**Michaud, Elmer J., Willimantic, Conn.**  
**Westcott Chuck Co., Oneida, N. Y.**  
 ♦ **Williams, J. H., & Co., Brooklyn, N. Y.**

**DOGS, MILLING MACHINE.**

- ♦ **Vulcan—J. H. Williams & Co., Brooklyn, N. Y.**

**DOGS, SAWMILL.**

- American, Giant, Champion—American Sawmill Machinery Co., Hackettstown, N. J.**  
**Hill-Curtis Co., Kalamazoo, Mich.**  
 ♦ **Knight—The Sinker-Davis Co., Indianapolis, Ind.**  
**Multnomah Iron Works, Portland, Ore.**  
**Soule Steam Feed Works, Meridian, Miss.**  
**Wheland—The Wheland Co., Chattanooga, Tenn.**

**DOGS, TIMBER.**

- ♦ **American Iron & Steel Mfg. Co., Lebanon, O.**  
**New England Bolt Co., Inc., Everett, Mass.**  
**Newhall Chain Forge & Iron Co., New York, N. Y.**

**DOLLIES, CONTRACTORS.**

- Clyde Iron Works, Duluth, Minn.**  
**Dixie Logging Tool Co., Chattanooga, Tenn.**  
**Electric—Electric Wheel Co., Quincy, Ill.**  
**Lansing Co., Lansing, Mich.**  
**Parker, S. E., Chicago, Ill.**  
**Pittsburg Block & Mfg. Co., Pittsburg, Pa.**

**DOMES, AIR, FOR RADIATOR AIR VALVES**

- Steam Economy Co., Chicago, Ill.**

**DOOR OPENER AND CLOSER.**

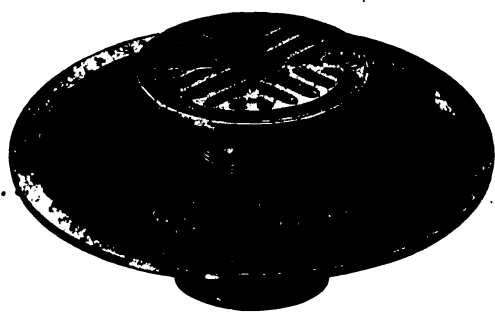
- R-W Stewart—Richards-Wilcox Mfg. Co., Aurora, Ill.**

**DOORS, ASH PIT AND FURNACE.**

- Adams—The Adams Co., Dubuque, Iowa.**  
**Bowles, J. E., Iron Works, Detroit.**  
**Brown Bros. Mfg. Co., Chicago, Ill.**  
**Canton Foundry & Machine Co., Canton, O.**  
**Cleveland—P. D. Crane Co., Cleveland, O.**  
**Conveyors Corporation of America, Chicago, Ill.**  
**De Luxe—United Conveyor Corporation, Chicago, Ill.**

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Park & McKay Co., Detroit, Mich.  
Rock Island Mfg. Co., Rock Island, Ill.  
Sanitary Company of America, Linfield, Pa.  
South Bend Foundry Co., South Bend, Ind.  
Thatcher Propeller & Foundry Corp., Albany, N. Y.  
Wolverine Foundry Co., Detroit, Mich.

## DOORS, FIRE.

(See also Windows and Doors, Metal.)

Badger, E. B. & Sons Co., Boston, Mass.  
Edwards—The Edwards Mfg. Co., Cincinnati, O.  
Fye R-Wall—Richards-Witcox Mfg. Co., Aurora, Ill.  
Lee—Thomas Lee & Son Co., Cincinnati, O.  
Moeschl-Edwards Corrugating Co., Cincinnati, O.  
Richmond Safety Gate Co., Richmond, Ind.  
Smith Elevator Co., Inc., Buffalo, N. Y.

## DOORS, FOR CLOSET STALLS.

Leclair Cabinet Works, Edwardsville, Ill.  
Paine Lumber Co., Ltd., Oshkosh, Wis.

## DOORS, MINE, AUTOMATIC TRAP.

Egyptian Iron Works, Murphysboro, Ill.

## DOORS, SIDEWALK, STEEL

Ernst, Chas. K., Buffalo, N. Y.

## DOWELS, BRASS AND WOOD.

Colts, T. & C.—Timmis & Clissold, Bound Brook, N. J.  
Davis & Hemphill, Elkridge, Md.  
Estes, E. B., & Sons, New York, N. Y.  
Everett, A., & Son, Auburn, N. Y.  
Knight, H. W., & Son, Seneca Falls, N. Y. (brass only).  
Michigan Bolt & Nut Works, Detroit, Mich.  
Novelty Turning Co., Norway, Me.  
Oliver Machinery Co., Grand Rapids, Mich.  
Perfect—The Dunker Supply Co., Canton, O.  
Rowe, Henry, Mfg. Co., Newaygo, Mich.  
Shanofelt Mfg. Co., Canton, O.  
Stiles & Co., H. A., Boston, Mass.  
Vandergrift & Morris, The, Shelbyville, Ind.

## DOWN SPOUTS OR CONDUCTOR PIPE, CAST IRON.

Clow, James B., & Sons, Chicago, Ill.

## DRAFT STABILIZERS.

Vapor Vacuum Heating Co., Philadelphia, Pa.

## DRAIN BOARDS, COPPER AND NICKEL SILVER.

Albuco—Alan R. H. Burk Mfg. Co., Philadelphia, Pa.  
Badger & Sons Co., E. R., Boston, Mass.  
Blessing, C. A., Philadelphia, Pa.  
Elkay Mfg. Co., Chicago, Ill.  
Littler Bros. Mfg. Co., Chicago, Ill.  
Mott, J. L., Iron Works, Trenton, N. J.  
Philadelphia Sheet Metal & Wood Works, Philadelphia.  
Trageser Steam Copper Works, John, New York.

## DRAINBOARDS, GALVANIZED.

Greason Mfg. Co., New York, N. Y.

## DRAINBOARDS, PETRIUM.

Petrium Sanitary Sink Co., Berkeley, Calif.

## DRAINBOARDS, PORCELAIN ENAMELED.

(See also "Sinks, Porcelain Enameled.")

Barnes Mfg. Co., The, Mansfield, O.  
Cahill—Cahill Iron Works, Chattanooga, Tenn.  
Chattanooga—The Cahill Iron Works, Chattanooga.  
Day-Ward Co., The, Warren, O.  
Jones Hollow Ware Co., Baltimore, Md.  
Humphries Mfg. Co., The, Mansfield, O.  
Kohler—Kohler Co., Kohler, Wis.  
McCambridge Co., Philadelphia, Pa.  
Minerva Reverso, Alco, Anglo—United States Sanitary Mfg. Co., Pittsburgh, Pa.  
National Sanitary Co., Salem, O.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Union Sanitary Works, Noblesville, Ind.

## DRAINBOARDS, VITREOUS CHINA.

Maddock's Sons Co., The, Thomas, Trenton, N. J.

## DRAINBOARDS, WOOD.

Becker Mfg. Co., The, Marietta, O.  
Berglass Mfg. Co., N. P., Brooklyn, N. Y.  
Detroit—Finkelstein & Kropf Mfg. Co., Chicago, Ill.  
Furlong, Thos. N., San Francisco, Cal.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Leclair Mfg. Co., Edwardsville, Ill.  
McCambridge Co., Philadelphia, Pa.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Petrium—Petrium Sanitary Sink Co., Berkeley, Calif.  
Philadelphia Sheet Metal & Wood Works, Philadelphia.  
Plumbers Woodworks Co., Algoma, Wis.  
Schwab Bros. Co., New York, N. Y.  
United States Sanitary Mfg. Co., Pittsburgh, Pa.  
Van Arco—Van Arnam Mfg. Co., Fort Wayne, Ind.

## DRAINS, CHILLAS FLOOR.

Acme—Compound Injector & Specialty Co., Chicago, Ill.  
Adams—F. W. Webb Mfg. Co., Boston, Mass.  
Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Atkinson Co., The, Rochester, N. Y.  
Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
Boosey—Greenwood Mfg. Co., Detroit, Mich.  
Brayman Water-tight—Brayman Water-Tight Drain Co., New York, N. Y.  
Butler—Thos. F. Butler, Lorain, Ohio.  
Callahan—Daly Plumbing Supply Co., Boston, Mass.  
Callahan, Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Casey-Hedges Co., Chattanooga, Tenn.  
Central—The Central Brass Mfg. Co., Cleveland, O.  
Chicago Pipe Co., Chicago, Ill.  
Chicago Pump Co., The, Chicago, Ill.  
Cleveland Faucet Co., The, Cleveland, O.  
Conrad's—John F. Conrad, Elizabeth, N. J.  
Dehn's Peerless—Compound Injector & Specialty Co., Chicago, Ill.  
Dry Pan—Frier Brass Mfg. Co., Kansas City, Mo.  
Edwardsville Brass Co., Edwardsville, Ill.  
Economy Pumping Machinery Co., Chicago, Ill.  
Eureka—Frier Brass Mfg. Co., Kansas City, Mo.  
Federal-Huber Co., Chicago, Ill.  
Fee & Mason Mfg. Co., New York, N. Y.  
Foster—C. H. Foster, St. Louis, Mo.  
Fries & Co., Buffalo, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Greenwood Mfg. Co., Detroit, Mich.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Hall Mfg. Co., Harrison, N. J.



Hunt's—Wm. Hunt, St. Louis, Mo.  
 Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Martin—Martin, Inc., Fort Wayne, Ind.  
 Mechanicville Specialty Supply Co., Mechanicville, N. Y.  
 Miller Foundry & Specialty Co., No. Tonawanda, N. Y.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Newark—Newark Brass Works, Newark, N. J.  
 Noxall—Crampton-Farley Brass Co., Kansas City, Mo.  
 Park & McKay Co., Detroit, Mich.  
 Peerless—Compound Injector & Specialty Co., Chicago, Ill.  
 Penberthy—Penberthy Injector Co., Detroit, Mich.  
 Purita—J. L. Mott Iron Works, Trenton, N. J.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Sanitas Mfg. Co., Boston, Mass.  
 Sanitary Company of America, Linfield, Pa.  
 San-Seal-O Signet, Noxall—Crampton-Farley Brass Co., Kansas City.  
 Sieben—Prier Brass Mfg. Co., Kansas City, Mo.  
 Signet—Crampton-Farley Brass Co., Kansas City, Mo.  
 Standard Brass Casting Co., Oakland, Calif.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 Sturm & Zero—Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Union Metal Works, Chelsea, Mass.  
 Webco—F. W. Webb Mfg. Co., Boston, Mass.

**DRAINERS, CELLAR, AUTOMATIC.**

Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Ellis Pat—The John Wieben Co., New York.  
 Hill—Hill Pump Co. of Midwest Engine Co., Anderson, Ind.  
 Ideal Mfg. & Supply Co., Oskaloosa, Ia.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Jenkins Mfg. Co., New York, N. Y.  
 Lawler's Automatic—Lawler Regulator Co., New York, N. Y.  
 Little Giant—Chicago Pump Co., Chicago, Ill.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Newark Brass Works, Newark, N. J. (non-automatic).  
 O S—The Gibson-Schlemmer Co., Cincinnati, O.  
 Penberthy—Penberthy Injector Co., Detroit, Mich.  
 Perfection—Erwin & Co., Chicago, Ill.  
 Roth Bros. Co., Chicago, Ill.  
 Savill—Thomas Savill's Sons, Philadelphia, Pa.  
 Shay-Bonnell—Shay-Bonnell Valve Co., Elizabeth, N. J.  
 Sherwood Mfg. Co., Buffalo, N. Y.  
 Sturm—Fries & Co., Buffalo, N. Y.  
 Thomas & Smith, Inc., Chicago, Ill.  
 Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.  
 Yeomans—Yeomans Bros., Chicago, Ill.

**DRAINERS, CYLINDER**

Smith—American Safety Lamp & Mine Supply Co., Scranton, Pa.

**DRAINERS, WASHING MACHINE.**

Penberthy—Penberthy Injector Co., Detroit, Mich.

**DRAINS, FLOOR, AND TRAP COMBINED.**

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
 American Seep Proof—American Foundry & Mfg. Co., St. Louis, Mo.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Boosey—Greenwood Mfg. Co., Detroit, Mich.  
 Brayman Flushing—Jiffy Fire Hose Rack Co., New York.  
 Broad Gauge Iron Works, Boston, Mass.  
 Columbus Brass Co., Columbus, O.  
 Dehn's Acme—Compound Injector & Specialty Co., Chicago, Ill.  
 Donovan—Sanitas Mfg. Co., Boston, Mass.  
 Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Foley—Hays Mfg. Co., Erie, Pa.  
 Hunts—William Hunt, St. Louis, Mo.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Josam—Josam Mfg. Co., Michigan City, Ind.  
 Lynn, Johnson, Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Martin, Ft. Wayne, Ind.  
 Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Nunn Brass Works, Rochester, N. Y.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Royal—American Foundry & Mfg. Co., St. Louis, Mo.  
 Sando Government—American Foundry & Mfg. Co., St. Louis, Mo.  
 Sanitary—Modern Iron Works, Quincy, Ill.  
 Sanitas Mfg. Co., Boston, Mass.  
 Speakman Co., Wilmington, Del.  
 S E—American Foundry & Mfg. Co., St. Louis, Mo.  
 Wade Iron Sanitary Mfg. Co., Chicago, Ill.

**DRAINS, ROOF.**

American Seep Proof—American Foundry & Mfg. Co., St. Louis, Mo.  
 Josam—Josam Mfg. Co., Michigan City, Ind.

**DRAINS AND TRAPS, SHOWER BATH.**

American Seep Proof—American Foundry & Mfg. Co., St. Louis, Mo.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Boosey—Greenwood Mfg. Co., Detroit, Mich.  
 Cochran—Harrison Safety Boiler Works, Philadelphia, Pa.  
 Dry Pan—Prier Brass Mfg. Co., Kansas City, Mo.  
 Fries & Co., Buffalo, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Josam Mfg. Co., Michigan City, Ind.  
 Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Martin—Martin, Fort Wayne, Ind.  
 Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Speakman Co., Wilmington, Del.  
 Seattle Brass Co., Seattle, Wash.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.

**DRAINS, STABLE.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Brayman, Water-tight—Brayman Water-Tight Drain Co., New York, N. Y.  
 Broad Gauge Iron Works, Boston, Mass.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Jenkins Mfg. Co., New York, N. Y.  
 Johnson, Lynn, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary—Sanitary Company of America, Linfield, Pa.

**DRAWERS, SEWAGE.**

Lyon Metallic Mfg. Co., Aurora, Ill.  
 New Britain Machine Co., New Britain, Conn.

**DREDGES, DIPPER.**

(See also "Machinery Dredging.")  
 Osgood Co., The, Marion, O.  
 Yuba—Yuba Mfg. Co., Marysville, Cal. (Metal mining.)

**DRESSERS, RIBB SEAT.**

Bernz, Otto, Newark, N. J.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Feather, N. B., Newark, N. J.  
 Frank Bros., New York, N. Y.  
 Good—Good Mfg. Co., Inc., New York, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Skinner—M. B. Skinner Co., Chicago, Ill.  
 Walworth Mfg. Co., Boston, Mass.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**DRESSERS, DIAMOND.**

Myers, W. F., Co., Inc., Bedford, Ind.

**DRESSERS AND CUTTERS, GRINDING WHEEL.**

Acme Diamond Tool Co., New York.  
 American Emery Wheel Works, Providence, R. I.  
 American—American Grinder Mfg. Co., Milwaukee, Wis.  
 Bennett—Bay State Stamping Co., Worcester, Mass.  
 Bingell's—Detroit Emery Wheel Co., Detroit, Mich.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Brisben—Cleveland Flue Cleaner Mfg. Co., Cleveland, Ohio.  
 Buckeye Vise Co., Cleveland, O.  
 Bur-Nor—Burgess-Norton Mfg. Co., Geneva, Ill.  
 Calder, George H., Lancaster, Pa.  
 Champlon—Western Tool & Mfg. Co., Springfield, O.  
 Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Collmer—Collmer Bros., South Bend, Ind.  
 Craft's—Arthur A. Crafts & Co., Boston, Mass.  
 Crown—Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Diamo-Carbo—Stephen Desmond Mfg. Co., Urbana, O.  
 Diamond—Diamond Saw & Stamping Co., Buffalo, N. Y.  
 Dickinson—Thos. L. Dickinson, New York, N. Y.  
 Duplex—Cleveland Flue Cleaner Mfg. Co., Cleveland, O.  
 Ehrmann & Bahlsen, New York.  
 Grammes & Sons, L. F., Allentown, Pa.  
 Gruba—Challenge Machine Co., Inc., Philadelphia, Pa.  
 H. F. Co., Detroit, Mich.  
 Huntington—L. Best Co., New York, N. Y.

**THE JOBBERS MFG. CO.** Sold only to the Jobbing Trade  
327 So. La Salle St., Chicago

- Huntington—Challenge Machine Co., Inc., Philadelphia, Pa.  
Huntington—Detroit Screw Works, Detroit, Mich.  
Huntington—The Chicago Screw Co., Chicago, Ill.  
Huntington—Collmer Bros., South Bend, Ind.  
Huntington, Paragon, Crescent—Curtain-Hebert Co., Inc., Gloversville, N. Y.  
♦ Huntington, Gardi, Truog—Challenge Machine Co., Inc., Philadelphia, Pa.  
Huntington—Desmond-Stephan Mfg. Co., Urbana, O.  
Huntington—The Erie Tool Works, Erie, Pa.  
Huntington—Rogers Shear Co., The, Warren, Pa.  
♦ Huntington—Steel & Tube Co. of America, Chicago, Ill.  
Huntington—Western Automatic Machine Screw Co., The, Elyria, O.  
Metcalf—Baldwin, Tuthill & Bolton, Grand Rapids, Mich.  
Norton—Collmer Bros., South Bend, Ind.  
♦ Norton—Norton Co., Worcester, Mass.  
Oliver Machinery Co., Grand Rapids, Mich.  
Perfect—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
Pratt, Wm. E., Mfg. Co., Chicago, Ill.  
♦ Reed—Reed Mfg. Co., Erie, Pa.  
Rearwin's—Quadrige Mfg. Co., Chicago, Ill.  
Robson Mfg. Co., Galesburg, Ill.  
Ross Mfg. Co., Cleveland, Ohio.  
♦ Sawyer—United States Rubber Co., Mechanical Goods Div., New York.  
S. D. Magazines—Desmond-Stephan Mfg. Co., Urbana, O.  
Sherman—Desmond-Stephan Mfg. Co., Urbana, O.  
Southington Hardware Co., Southington, Conn.  
Standard Redresser—Keystone Grinder & Mfg. Co., Pittsburgh, Pa.  
♦ Sterling—Diamond Saw & Stamping Works, Buffalo.  
Victor Tool Mfg. Co., Chicago, Ill.  
Warren Axe & Tool Co., Warren, Pa.  
Wrigley's—The Thos. Wrigley Co., Chicago, Ill.  
Warren Safety Huntington—Warren Axe & Tool Co., Warren, Pa.  
Wheel Truing Tool Co., Detroit, Mich.  
♦ Western Tool & Mfg. Co., Springfield, O.

**DRESSERS, FLUMBERS.**

Bernz, Otto, Newark, N. J.  
Johnson, Wm., Newark, N. J.  
National Tool Co., Brooklyn, N. Y.

**DRESSING, BELT, BAR.**

- Acme—Acme Refining Co., The, Cleveland, O.  
Allen, W. D. Allen Mfg. Co., Chicago, Ill.  
Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Atlantic—Atlantic Mfg. Co., Wilmington, Del.  
Belt Wax—F. Ranville Co., Grand Rapids, Mich.  
Beltex—Chicago Belting Co., Chicago, Ill.  
Beltine—Jos. C. Paulus & Co., Philadelphia, Pa.  
Blaxstick—Main Belting Co., Philadelphia, Pa.  
♦ Blue Ribbon—The Jobbers' Mfg. Co., Chicago, Ill.  
♦ Bradford Stick—Bradford Belting Co., Cincinnati, O.  
Brush Bar—Wayo Mfg. Co., Buffalo, N. Y.  
Buffalo—Buffalo Belt Dressing Co., Buffalo, N. Y.  
Central Belting Co., New York, N. Y.  
Cantol—Cantol Wax Company, Bloomington, Ind.  
Cesco—Chicago Engineer Supply Co., Chicago.  
Corliss—Corliss Supply Co., St. Louis, Mo.  
Cortland Specialty Co., Cortland, N. Y.  
♦ Detroit Oak Belting Co., Detroit, Mich.  
Dixon, Joseph Crucible Co., Jersey City, N. J.  
Do-Ro—Doermann & Roehr, Cincinnati, O.  
Economy—Baltimore Belting Co., Baltimore.  
Electric—Buffalo Specialty Co., Buffalo.  
Garnet Process—The Garnet Co., Allentown, Pa.  
Hercules—Hercules Belt Lace Mfg. Co., Chicago, Ill.  
Hold-On—D. P. Brown & Co., Philadelphia, Pa.  
Hudson—Hudson Belting Co., Worcester, Mass.  
Hytest—L. G. Isaacson Co., Inc., Aberdeen, Wash.  
Ironides—The Ironides Co., Columbus, O.  
I X L—W. J. Kramer Oil Co., Milwaukee, Wis.  
Kelly Graphite Mills, New York, N. Y.  
Laurence, A. C., New York, N. Y.  
Leatherene—S. W. Davis Oil Co., Providence, R. I.  
Matchless—Albion Mfg. Co., Seattle, Wash.  
Neverslip—White & Bagley Co., The, Worcester, Mass.  
Noxall—Eagle Belting Co., Chicago, Ill.  
♦ Phoenix—New York Leather Belting Co., New York.  
Polar Bar—The Geo. W. Southwick Co., New York.  
Ponemah—The Ulmer Leather Co., Norwich, Conn.  
Powhatan—Smith-Courtney Co., South Richmond, Va.

- Triumph—Geo. Rahmann & Co., New York, N. Y.  
Rhoads Stick, Rhoads Belt Preserver—E. Rhoads & Sons, Philadelphia, Pa.  
Ringlock—Dexter Supply Co., Chicago, Ill.  
Ruboil—Ruboil Belting Co., Philadelphia, Pa.  
♦ Sabco—United States Rubber Co., Mechanical Goods Div., New York.  
Schultz Belting Co., St. Louis, Mo.  
Smiro—Smith & Robinson, Chicago, Ill.  
Star—Chesapeake Belting Co., Baltimore, Md.  
♦ Star, Bar—Graton & Knight Mfg. Co., Worcester, Mass.  
Stephan Stick—Desmond-Stephan Mfg. Co., Urbana, Ohio.  
Stephenson—Stephenson Mfg. Co., Albany, N. Y.  
Success Belt Stick—Success Novelty Co., The, Richmond, Va.  
Van Come Along—Vandervoort Hdw. Co., Lansing, Mich.  
Wayo Brush Bar—Wayo Mfg. Co., Buffalo, N. Y.  
Wizard—Richmond Belt Dressing Mfg. Co., Richmond, Va.

**DRESSING, BELT, LIQUID AND PASTE.**

- Acme—Acme Refining Co., The, Cleveland, O.  
Acme—The Akron Belting Co., Akron, O.  
Agrippa—Agrippa Mfg. Corp., New York, N. Y.  
Ajax—W. D. Allen Mfg. Co., Chicago, Ill. (oil).  
♦ Alexander—Alexander Bros., Philadelphia, Pa.  
Amber—Eagle Belting Co., Chicago, Ill.  
♦ American—American Steam Packing Co., Boston.  
Amoilco—American Oil Corp., Jackson, Mich.  
Anti-Friction—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Anti-Slip—Geo. Callahan & Co., New York.  
Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Australian Belt Preservative—McLellan Mfg. Co., New York, N. Y.  
Balata—Victor-Balata & Textile Belting Co., New York, N. Y.  
Baltobelt—Baltimore Belting Co., Baltimore, Md.  
Baum's Castorine Co., Rome, N. Y.  
Belden's Pynoleum—A. G. Belden & Co., New York.  
Beltex—Chicago Belting Co., Chicago.  
Beltine—Jos. C. Paulus & Co., Philadelphia, Pa.  
Belt-Oil—E. R. Senn & Co., New York, N. Y.  
Belt-Sek, Can-Va-Sek—Sek Mfg. Co., Chicago, Ill.  
Best Surfact—F. Ranville Co., Grand Rapids, Mich.  
Black Diamond—Black Diamond Mfg. Co., Cincinnati, O.  
♦ Blue Ribbon—The Jobbers' Mfg. Co., Chicago, Ill.  
Buckeye—Buckeye Belting & Supply Co., Cleveland, O.  
Buffalo—Buffalo Belting Works, Buffalo, N. Y.  
Buffalo—Buffalo Belt Dressing Co., Buffalo, N. Y.  
Bull Dog—Indian Refining Co., Inc., New York.  
Cantol—Cantol Wax Company, Bloomington, Ind.  
Carton—Carton Belting Co., Boston, Mass.  
♦ Castorol—A. W. Chesterton Co., Boston, Mass.  
♦ Charlotte Clean Quality—Charlotte Leather Belting Co., Charlotte, N. C.  
Charter—N. Palmer & Co., Bridgeport, Conn.  
Chicago Rawhide Mfg. Co., Chicago, Ill.  
Clean Quality—Charlotte Leather Belting Co., Charlotte, N. C.  
Cleaner & Stuffer—F. Ranville Co., Grand Rapids.  
Cling-Surface—Cling-Surface Co., Buffalo, N. Y.  
Cloral, Loral—Viscol Co., East Cambridge, Mass.  
Cochegan, Mohawk—Ulmer Leather Co., The, Norwich, Conn.  
Cortland Specialty Co., The, Cortland, N. Y.  
Coupe, Ralph, Swansea, Mass.  
Cracker Jack—Manufacturers' Belt Hook Co., Chicago.  
Crown Belt Food Co., Cleveland, O.  
Curriers Dubbing—F. Ranville Co., Grand Rapids.  
Do-Ro—Doermann-Roeher Co., Cincinnati, O.  
Dubitana—Meier-Andrus Belting Co., Newark, N. J.  
Duck—Main Belting Co., Philadelphia, Pa.  
Dura Visca—Wm. R. Winn, New York, N. Y.  
Durapul—American Agramid Corporation, Flushing, N. Y.  
♦ Eagle Counter & Leather Co., Cincinnati, O.  
Eagleline—Eagle Oil & Supply Co., Boston.  
♦ Ease-on—Mount Vernon Belting Co., Baltimore, Md.  
Eclipse—Eclipse Pulley Covering Co., Chicago, Ill.  
Electric—Buffalo Specialty Co., Buffalo, N. Y.  
Electric—The Akron Belting Co., Akron, O.  
Ensign Refining Co., Cleveland, O.  
Erua—Cling-Surface Co., Buffalo, N. Y.  
Eureka—Standard Oil Co. of New York, New York, N. Y.  
♦ Excelsior—A. W. Chesterton Co., Boston, Mass.  
Excelsior—F. Ranville Co., Grand Rapids, Mich.  
Federal—Federal Graphite Mills, Cleveland, O.  
Flex—Improved Surface Mfg. Co., North Tonawanda, N. Y.  
Flexite—Burr Oak Belting Co., Cincinnati, O.  
Flexol—Fairbanks, Morse & Co., Chicago, Ill.  
Frontier—Frontier Mfg. Co., North Tonawanda, N. Y.  
Gandy—The Gandy Belting Co., Baltimore, Md.  
Garnet Process—The Garnet Co., Allentown, Pa.  
German—Widdicombe-Reed Co., Vestaburg, Mich.  
Grasplit Mfg. Co., Chicago, Ill.  
Great Western Oil Co., The, Cleveland, O.  
Green Seal—Phoenix Oil Co., The, Cleveland, O.

**Gripens**—The Geo. W. Southwick Co., New York  
**Grip-Tite**—Grip-Tite Co., New Brunswick, N. J.  
**Harris**—A. W. Harris Oil Co., Providence, R. I.  
**H. B.**—Fenwick-Reddaway Mfg. Co., Newark, N. J.  
**Hippo**—Reed & Duecker, Memphis, Tenn.  
**Hold-on**—D. P. Brown & Co., Philadelphia, Pa.  
**Holtite**—New York Lubricating Oil Co., New York, N. Y.  
**Holyoke Belt Oil**—Holyoke Belting Co., Holyoke, Mass.  
**Hosmers**—G. A. Hosmer Co., Buffalo, N. Y.  
**Houghton's**—E. F. Houghton Co., Philadelphia, Pa.  
**Hoyt**—Edward R. Ladew Co., Inc., Glen Cove, N. Y.  
**Hug-it**—Hinds & Coon, Boston, Mass.  
**Ideal**—Akron Belting Co., The, Akron, O.  
**India**—A. W. Chesterton Co., Boston, Mass.  
**Invincible**—Invincible Mfg. Co., Columbus, O.  
**Ironsides** Company, Columbus, Ohio.  
**I. X. L.**—Commercial Lubricating Co., Philadelphia  
**I. X. L.**—W. J. Kramer Oil Co., Milwaukee, Wis.  
**Jewell**—Jewell Belting Co., Hartford, Conn.  
**Just Right**—C. H. Ellert Mfg. Co., Evansville, Ind.  
**Leather Liniment**—Olmsted-Flint Co., Cambridge, Mass.  
**Leatherene**—Providence Oil Co., Providence, R. I.  
**Lighting Mfg. Co.**, Philadelphia, Pa.  
**Magie**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Main Belting Co.**, Philadelphia, Pa.  
**Matchless**—Albion Mfg. Co., Seattle, Wash.  
**Monarch**—The Bradford Belting Co., Cincinnati, O.  
**Mohawk**—Albany Belting & Supply Co., Albany, N. Y.  
**Mohawk**—The Ulmer Leather Co., Norwich, Conn. (paste).  
**Mythic**—The Ulmer Leather Co., Norwich, Conn.  
**National Leather Preservative Co.**, Chicago, Ill.  
**New Life**—Chicago Rawhide Co., The, Chicago, Ill.  
**Nonpareil**—John M. Watts Sons, Philadelphia, Pa.  
**Number One**—Hudson Belting Co., Worcester, Mass.  
**Oleum Products Co.**, Scranton, Pa.  
**Oxolox**—The F. S. Walton Co., Philadelphia, Pa.  
**Page Belting Co.**, Concord, N. H.  
**Parvalue**—Fairbanks, Morse & Co., Chicago, Ill.  
**Patterson Lubricating Co.**, Boston, Mass.  
**Pease**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Plomo**—The Plomo Specialty Mfg. Co., Cleveland, O.  
**Pluvio**—Viscol Co., East Cambridge, Mass.  
**Poco**—Providence Oil Co., Providence, R. I.  
**Ranville's**—F. Ranville Co., Grand Rapids, Mich.  
**Red Cross**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Reinhold Belting & Supply Co.**, Brooklyn, N. Y.  
**Rhoads Belt Preserver**—J. E. Rhoads & Sons, Philadelphia, Pa.  
**Royal Worcester**—Graton & Knight Mfg. Co., Worcester, Mass.  
**Rubber Coating**—F. Ranville Co., Grand Rapids.  
**Ruboil**—Ruboil Belting Co., Philadelphia, Pa.  
**Run Better**—Swiss-Providence Oil Co., Providence, R. I.  
**Sabre & Shield**—McCauley Belting Co., Chicago, Ill.  
**Sawyer**—United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
**Schieren's Beltfiller**—Chas. A. Schieren Co., New York.  
**Schieren's Fly-Foot**—Chas. A. Schieren Co., New York.  
**Schultz Belting Co.**, St. Louis, Mo.  
**Seal Oil**—The Whitlock Mfg. Co., Cleveland, O.  
**Sero**—Sero Specialty Co., Cleveland, O.  
**Shield**—McCauley Belting Co., Chicago, Ill.  
**Shultz Belting Co.**, St. Louis, Mo.  
**Signet Belt Oil**—Russia Cement Co., Gloucester, Mass.  
**Smiro**—Smith & Robinson, Chicago, Ill.  
**Star**—Graton & Knight Mfg. Co., Worcester, Mass.  
**Star**—Star Mfg. Co., Stamford, Conn.  
**Star**—The Chesapeake Belting Co., Baltimore, Md.  
**Steer**—Joseph Meier's Sons, Newark, N. J.  
**Stephenson**—Stephenson Mfg. Co., Albany, N. Y.  
**Superior**—Superior Belting Mfg. Co., Rochester, N. Y.  
**Swiss**—S. W. Davis Oil Co., Providence, R. I.  
**Talismanic Co.**, North Tonawanda, N. Y.  
**Tanners' Dublin**—Corliss Supply Co., St. Louis, Mo.  
**Texaco**—Texas Co., The, New York, N. Y.  
**Theanol Mfg. Co.**, Philadelphia, Pa.  
**Triumph**—Geo. Rahmann & Co., New York.  
**Tropical Paint & Oil Co.**, Cleveland, O.  
**Twentieth Century**—Baverson Oil Works, Erie, Pa.  
**Velvetone**—The Whitlock Mfg. Co., Cleveland, O.  
**Victor**—New York Leather Belting Co., New York.  
**Wadham's Oil Co.**, Milwaukee, Wis.  
**Warren**—Warren Belting Co., Worcester, Mass.  
**Wooster**—Duryea Mfg. Co., Bayonne, N. J.  
**World Refining Co.**, The, Easton, Pa.  
**X-L-N-C**—Commercial Chemical Co., Boston, Mass.

**DRESSING, CLUTCH AND BRAKE**

Northwestern Chemical Co., Marietta, O.  
 Reinhold Belting & Supply Co., Brooklyn, N. Y.

**DRESSING DISTRIBUTORS, FOR APPLYING BELT DRESSING**

Flex Power Distributor—Improved Surface Mfg. Co., North Tonawanda, N. Y.

**DRESSING, ROPE DRIVE.**

Albion—Albion Mfg. Co., Seattle, Wash.  
 ♦ **Blue Ribbon**—The Jobbers' Mfg. Co., Chicago Ill.  
 ♦ **Cling-Surface**—Cling-Surface Co., Buffalo, N. Y.  
 Ensign Refining Co., The, Cleveland, O.  
 Indian Refining Co., Inc., New York.  
 Ironsides—The Ironsides Co., Columbus, O.  
 ♦ **Lambeth, Anti-Fraying Compound**—Lambeth Rope Corp., New Bedford, Mass.  
 Link-Belt Company, Chicago and Philadelphia.  
 Ohio—The Ohio Grease Co., Loudonville, O.  
 Plomo—Plomo Specialty Mfg. Co., Cleveland, O.  
 Ranville Co., F., Grand Rapids, Mich.  
 Sero—Sero Specialty Co., Cleveland, Ohio.  
 Stephenson—Stephenson Mfg. Co., Albany, N. Y.

**DRESSING AND LUBRICANTS, WIRE ROPE.**

♦ **AaA1**—Dodge Mfg. Co., Mishawaka, Ind.  
 Acme—Acme Refining Co., The, Cleveland, O.  
 ♦ **Blue Ribbon**—The Jobbers' Mfg. Co., Chicago Ill.  
 Great Western Oil Co., The, Cleveland, O.  
 Ironsides—The Ironsides Co., Columbus, O.  
 Macomber & Whyte Rope Co., Kenosha, Wis.  
 Ohio—Ohio Grease Co., Loudonville, O.  
 Plomo—Plomo Specialty Mfg. Co., Cleveland, O.  
 Ranville Co., F., Grand Rapids, Mich.  
 Savac—Cling Surface Co., Buffalo, N. Y.  
 Stephenson—Stephenson Mfg. Co., Albany, N. Y.  
 The Moore Oil Refining Co., Cincinnati, O.  
 Wire Rope Lubricant Co., Newark, N. J. (Lubricator, Plumbago, Grease, Protector, Elevator Rope Compound and Tramway Rope Lubricant.)

**DRILLS, ANGLE.**

Dikeman Mfg. Co., Norwalk, Conn.

**DRILLS, AUTOMATIC FEED.**

Mr. Punch—Goodell-Pratt Co., Greenfield, Mass.  
 Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

**DRILLS, BIT STOCK.**  
(See "Bits, Auger.")

The Cincinnati Tool Co., Cincinnati, Ohio.  
 Etna Company, Taunton, Mass.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Rockford Twist Drill Co., Rockford, Ill.  
 ♦ **Whitman & Barnes Mfg. Co.**, Akron, O.

**DRILLS, BLACKSMITH.**

American—American Scale Co., Kansas City, Mo.  
 ♦ **Cleveland Twist Drill Co.**, Cleveland, O.  
 ♦ **Detroit Twist Drill Co.**, Detroit, Mich.  
 Potts, D. H., Co., Lancaster, Pa.  
 Rockford Twist Drill Co., Rockford, Ill.

**DRILLS, BREAST.**

(For this and all other mechanical drills, see "Machines, Drilling.")

**DRILLS, BRICK AND STONE.**

Chicago Expansion Bolt Co., Chicago, Ill.  
 Cleveland—Cleveland Rock Drill Co., Cleveland, O.  
 Diamond "N"—Diamond Expansion Bolt Co., New York, N. Y.  
 Diemer, Geo. W., Mfg. Co., Chicago, Ill.  
 Hallett Iron Works, The, Harvey, Ill.  
 Irvington Mfg. Co., Irvington, N. J.  
 Klein-Logan Co., The, Pittsburgh, Pa.  
 Leetonia Tool Co., The, Leetonia, Ohio.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 National Lead Co., New York, N. Y.  
 National Tool Co., Brooklyn, N. Y.  
 Osborne—Joseph G. Pollard Co., Inc., Brooklyn, N. Y.  
 Phillips Spring Hammer—Daugherty-Smith-Phillips Co., Chicago, Ill.  
 Star—Star Expansion Bolt Co., New York, N. Y.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 U. S. E.—United States Expansion Bolt Co., New York, N. Y.  
 Warwood—Warwood Tool Co., Wheeling, W. Va.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
 Yonts, C. H., Co., Meadville, Pa.

**DRILLS, CENTER.**

♦ **Cleveland Twist Drill Co.**, Cleveland, O.  
 Cogsdill Mfg. Co., Detroit, Mich.  
 ♦ **Detroit**—Detroit Twist Drill Co., Detroit, Mich.  
 ♦ **Lincoln Twist Drill Co.**, Taunton, Mass.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Rockford Twist Drill Co., Rockford, Ill.  
 Slocumb—J. T. Slocumb Co., Providence, R. I.  
 Standard Tool Co., Cleveland, O.  
 ♦ **Union Twist Drill Co.**, Athol, Mass.  
 ♦ **Whitman & Barnes Mfg. Co.**, Akron, O.

**DRILLS, CORE.**

Calyx—Ingersoll Rand Co., New York.

Dobbins—Dobbins Core Drill Co., Inc., New York.  
McKierman—Terry Drill Co., New York, N. Y.  
Standard Diamond Drill Co., Chicago, Ill.

#### DRILL & COUNTERSINK COMBINED.

Apex Drill Co., The, Cincinnati, O.  
Cleveland Twist Drill Co., Cleveland, O.  
Syracuse Twist Drill Co., Syracuse, N. Y.

#### DRILL DRIFTS.

- ◆ Armstrong Bros. Tools Co., Chicago.
- ◆ Billings & Spencer Co., Hartford, Conn.
- ◆ Whitman & Barnes Co., The, Akron, Ohio.

#### DRILLS, ELECTRIC.

(See "Machines, Drilling, Electric.")

#### DRILLS, HEXAGON AND SQUARE HOLE.

Hex—Detroit Hexagon Drill Co., Detroit, Mich.

#### DRILLS, HAMMER.

Chicago Expansion Bolt Co., Chicago, Ill.

#### DRILLS, LEFT HAND.

- ◆ Cleveland Twist Drill Co., Cleveland, Ohio.
- Rockford Twist Drill Co., Rockford, Ill.

#### DRILLS, LIP, FOR DRILLING PORCELAIN, GLASS, CARBON, MARBLE, ETC.

Crafts—Arthur A. Crafts & Co., Boston, Mass.

#### DRILLS, MINE, ROOF.

Iperial Roof Auger—Hardsocg, Martin Co., Pittsburgh, Pa.  
Leetonia Tool Co., The, Leetonia, Ohio.

#### DRILLS, PIPE TAPPING.

- ◆ Billings & Spencer Co., The, Hartford, Conn.
- Boust, A. C., Northumberland, Pa.
- ◆ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass. (drill and tap comb).
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Mueller Mfg. Co., H., Decatur, Ill.
- Pratt & Whitney Co., Hartford, Conn.
- ◆ Walworth Mfg. Co., Boston, Mass.

#### DRILLS, PLUG.

Leetonia Tool Co., The, Leetonia, Ohio.  
Pollard, Joseph G., Co., Inc., Brooklyn, N. Y.

#### DRILLS, PNEUMATIC.

(See "Machines, Drilling, Pneumatic")

#### DRILLS, PORTABLE, OIL WELL.

(See also "Machines, Well-Drilling.")

Keystone—Keystone Driller Co., Beaver Falls, Pa.

#### DRILLS, RATCHET.

(See also "Ratchets and Ratchet Drills.")

- ◆ Armstrong Brothers Tool Co., Chicago, Ill.
- Beland—Aldon Company, The, Chicago, Ill.
- ◆ Cleveland Twist Drill Co., Cleveland, Ohio.
- Jiffy—Columbia Metal Box Co., New York, N. Y.
- Keystone Monarch—Keystone Mfg. Co., Buffalo, N. Y.
- Lutz—Lutz Company, Inc., Philadelphia, Pa.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Pratt & Whitney Co., Hartford, Conn.
- Renshaw—Pratt & Whitney Co., New York, N. Y.
- Rockford Twist Drill Co., Rockford, Ill.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

#### DRILLS, RECIPROCATING.

Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### DRILLS, FOR DRILLING OUT BROKEN SCREWS.

Strauss, E., Brooklyn, N. Y.

#### DRILLS, SHELL, OR STOVE.

- ◆ Cleveland Twist Drill Co., Cleveland, Ohio.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- ◆ Lincoln Twist Drill Co., Taunton, Mass.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Star—C. H. Yonts Co., Meadville, Pa.
- U. S. High Speed Steel & Tool Corp., New York.

#### DRILLS, SLIDING HEAD.

Dresses Machine Tool Co., Cincinnati, Ohio.  
Pawling & Harnischfeger Co., Milwaukee, Wis.  
Silver—The Silver Mfg. Co., Salem, O.

#### DRILL SPEEDERS.

Graham—The Graham Mfg. Co., Providence, R. I.

#### DRILLS, SPRING HAMMER.

Star—Star Expansion Bolt Co., New York, N. Y.

#### DRILLS, STAR POINT AND DIAMOND POINT.

Anderson Tool & Supply Co., Detroit, Mich.  
Arrow Forging & Tool Works, Chicago, Ill.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Buffum Tool Co., Louisiana, Mo.  
Diamond Expansion Bolt Co., New York, N. Y.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Hallett Iron Works, The, Harvey, Ill.  
Irvington Mfg. Co., Irvington, N. J.  
Kilborn-Bishop Co., New Haven, Conn.  
Kraeuter & Co., Inc., Newark, N. J.  
Mephisto—W. A. Ives Mfg. Co., Wallingford, Conn.  
Milwaukee Tool & Forge Co., Milwaukee, Wis.  
Mound—Mound Tool Co., St. Louis, Mo.  
National Tool Co., Brooklyn, N. Y.  
Philadelphia—Steward & Romaine Mfg. Co., Philadelphia, Pa.  
Steffen, Gustave, Philadelphia, Pa.  
Syracuse—Syracuse Twist Drill Co., Syracuse, N. Y.  
U. S. Expansion Bolt Co., New York, N. Y.  
Vulcan Tool Mfg. Co., The, Quincy, Mass.  
W. C. Carver—Carver Tool Works, Spring Valley, N. Y.

#### DRILLS, TAP.

- ◆ Bay State Tap & Die Co., Mansfield, Mass.
- ◆ Cleveland Twist Drill Co., Cleveland, O.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Mueller Mfg. Co., H., Decatur, Ill.
- Pratt & Whitney Co., Hartford, Conn.
- ◆ Standard Tool Co., Cleveland, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

#### DRILLS, TACK.

Latrobe—Latrobe Tool Co., Latrobe, Pa.  
◆ Lovejoy Tool Works, Chicago, Ill.  
Moore—Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
Rockford Twist Drill Co., Rockford, Ill.

#### DRILLS, TWIST, CARBON AND HIGH SPEED STEEL.

Alvord Reamer & Tool Co., Millersburg, Pa.  
American Twist Drill Co., Detroit, Mich.  
Ampco—American Machine Products Co., Detroit, Mich.  
Buckeye—Buckeye Twist Drill Co., Alliance, O.  
Celfor—Clark Equipment Co., Buchanan, Mich.  
◆ Cleveland—Cleveland Twist Drill Co., The, Cleveland, O.  
Colton Detroit—Arthur Colton Co., Detroit, Mich.  
◆ Detroit, Detroit Special—Detroit Twist Drill Co., Detroit, Mich.  
◆ Diamond—Whitman & Barnes Mfg. Co., Akron, O.  
Down Tool Works, Inc., Fleetwood, Pa.  
◆ Economy—Whitman & Barnes Mfg. Co., Akron, O.  
Etna Company, Taunton, Mass.  
Fenn Mfg. Co., Hartford, Conn.  
Foote Burt Co., The, Cleveland, Ohio.  
Gladium—The Gladium Co., Inc., New York, N. Y.  
◆ Greenfield Tap & Die Corp., Greenfield, Mass.  
◆ Hercules—Whitman & Barnes Mfg. Co., Akron, O.  
Latrobe—Latrobe Tool Co., Latrobe, Pa.  
Hoenschel Forged Twist Drill & Tool Co., Detroit, Mich.  
McCarthy Drill & Tool Corp., Toledo, Ohio.  
McKenna—McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.  
◆ Messo—Cleveland Twist Drill Co., Cleveland, O.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
◆ National Twist Drill & Tool Co., Detroit, Mich.  
New Process Twist Drill Co., Taunton, Mass.  
◆ Norka—Whitman & Barnes Mfg. Co., Akron, O.  
Novo, Boker—H. Boker & Co., Inc., New York (importer).  
Olympic—Montgomery & Co., Inc., New York.  
◆ Faragon—Cleveland Twist Drill Co., Cleveland, Ohio.  
Pecorp—Providence Engineering Corp., Providence, R. I.  
◆ Pioneer—Lincoln Twist Drill Co., Taunton, Mass.  
Polk, A. J., & Son, Millersburg, Pa.  
Pratt & Whitney Co., Hartford, Conn.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
Reliance—New Process Twist Drill Co., Taunton, Mass.  
Reliance—Reliance Steel & Tool Co., New York, N. Y.  
Rich—Rich Tool Co., Chicago, Ill.  
Rockford Twist Drill Co., Rockford, Ill.  
Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.  
◆ Standard Tool Co., Cleveland, O.  
Star Bit & Tool Co., Rockford, Ill.  
Swan Co., The, James, Seymour, Conn.  
Syracuse Twist Drill Co., Syracuse, N. Y.  
◆ Union Twist Drill Co., Athol, Mass.  
U. S. High Speed Steel & Tool Corp., New York, N. Y.  
Whitaker Mfg. Co., The, Chicago, Ill.

- ◆ Whitman & Barnes Mfg. Co., Akron, O.
- ◆ Whitman & Barnes Co., The, Akron, Ohio.
- Windau Tool Co., Cleveland, Ohio.
- Wood—Morris Wood & Sons, Chicago, Ill.
- Wrigley—Alfred Herbert, Ltd., New York.

**DRILLS, TWIST, FLAT.**

- Celfor—Clark Equipment Co., Buchanan, Mich.
- ◆ Pioneer—Lincoln Twist Drill Co., Taunton, Mass.
- ◆ Paragon—Cleveland Twist Drill Co., Cleveland, O.
- ◆ Reliance—New Process Twist Drill Co., Taunton, Mass.
- Rockford Twist Drill Co., Rockford, Ill.

**DRILLS, TWIST, WIRE GAGE.**

- Buckeye Twist Drill Co., Alliance, O.
- ◆ Cleveland Twist Drill Co., Cleveland, Ohio.
- Hargrave—The Cincinnati Tool Co., Cincinnati, O.
- New Process Twist Drill Co., Taunton, Mass.
- Rockford Twist Drill Co., Rockford, Ill.
- ◆ Whitman & Barnes Co., The, Akron, O.

**DRILLERS, OIL AND GAS WELL.**

(See also "Machinery Well Drilling.")

- Armstrong—Armstrong Mfg. Co., Waterloo, Iowa.
- Cyclone—Sanderson-Cyclone Drill Co., Orrville, O.
- Keystone—Keystone Driller Co., Beaver Falls, Pa.
- Parkersburg Rig & Reel Co., Parkersburg, W. Va.

**DRILLING CABLES.**

(See "Rope, Manila" and "Rope, Wire.")

**DRINKING FOUNTAINS.**

(See "Fountains, Drinking.")

**DRIPS, GAUGE COCK.**

- Knapp Mfg. Co., New York, N. Y.

**DRIVERS, BOLT.**

- ◆ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.
- Denver Rock Drill Mfg. Co., Denver, Colo. (shipbuilding air).

**DRIVERS, DRIFT BOLT AND SPIKE.**

- Ingersoll-Rand Co., New York, N. Y.
- Thor—Independent Pneumatic Tool Co., Chicago, Ill.

**DRIVERS, FILE.**

- Austin Machinery Corp., Chicago, Ill.
- Bucyrus Loco—Bucyrus Co., South Milwaukee, Wis.
- Goubert—A. A. Goubert, New York, N. Y.
- Industrial Works, Bay City, Mich.
- Ingersoll-Rand Co., New York, N. Y. (sheet).
- Lidgerwood Mfg. Co., New York, N. Y.
- McKiernan-Terry Drill Co., New York.
- McMyler-Interstate Co., Bedford, O.
- National Equipment Co., Chicago, Ill.
- Union Elevator & Machine Co., Chicago, Ill.
- Union—Union Iron Works, Hoboken, N. J.
- Vulcan Iron Works, Chicago, Ill.

**DRIVERS, STUD, RATCHET.**

- ◆ Keystone—The Keystone Mfg. Co., Buffalo, N. Y.

**DRIVES, CHAIN, SILENT.**

(See "Chain, Transmission.")

- Link-Belt Company, Chicago, Ill.
- Morse Chain Co., The, Ithaca, N. Y.

**DRIVES, POWER, ELECTRIC.**

- ◆ Toledo—Toledo Pipe Threading Machine Co., Toledo, Ohio.

**DRIVES, ROPE.**

(See also "Rope, Transmission.")

- ◆ Dodge Sales & Engineering Co., Mishawaka, Ind.
- J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.
- Link-Belt Company, Chicago and Philadelphia.
- ◆ Medart Patent Pulley Co., St. Louis, Mo.
- Meese & Gottfried Co., San Francisco, Cal.
- Mesta—Mesta Machine Co., Pittsburgh, Pa.
- Stephens-Adamson Mfg. Co., Aurora, Ill.
- Weller Mfg. Co., Chicago, Ill.

**DROPS, GRAVITY.**

- Sedgwick Machine Works, New York.

**DRUMS, BOILER.**

- Best—Best Mfg. Co., Pittsburgh, Pa.
- Cornell & Underhill, New York, N. Y.
- General Pipe & Foundry Co., Atlanta, Ga.
- Kewanee Boiler Co., Kewanee, Ill.
- Petroleum Iron Works Co., Sharon, Pa.

**DRUMS, GRAVITY, INCLINE.**

- John H. Carlin Machine Co., Pittsburgh, Pa.

**DRUMS, HOISTING.**

- Brewer, H. & Co., Tecumseh, Mich.
- Oliver, Wm. J., Mfg. Co., Knoxville, Tenn.

**DRUMS, SANDING, PNEUMATIC.**

- Redin, Ekstrom & Co., Rockford, Ill.

**DRUMS OR BARRELS, STEEL, SHIPPING.**

(See "Barrels or Drums Steel.")

- American Steel Package Co., Defiance, O.
- Cleveland Steel Barrel Co., Cleveland, O.
- Columbian Steel Tank Co., Kansas City, Mo.
- Columbia—Meurer Steel Barrel Co., Inc., New York, N. Y.
- Detroit—Detroit Range Boiler Co., Detroit, Mich.
- Draper Mfg. Co., The, Cleveland, O.
- Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.
- Hackney Presteel, Gem—Petroleum Iron Works Co., Sharon, Pa.
- Improved Appliance Co., Brooklyn, N. Y.
- Koven, L. O. & Bros., New York, N. Y.
- Mullins Body Corp., Stamping Dept. A, Salem, O.
- New Era—Toledo Steel Barrel Co., Chicago, Ill.
- Perfect—Detroit Range Boiler Co., Detroit, Mich.
- Riverside Boiler Works, Cambridgeport, Mass.
- W & B—Wilson & Bennett Mfg. Co., Chicago, Ill.
- Wm. E. Scaife & Sons Co., Pittsburgh, Pa.
- Welded Steel Barrel Corp., Detroit, Mich.

**DRYERS, BRICK AND TILE.**

(See "Kilns, Dry.")

**DRYERS, CLOTHES, OUTDOOR.**

- Canton—Canton Clothes Dryer Co., The, Canton, Ohio.
- Chicago Sun—Chicago Dryer Co., Chicago.
- Hill—Hill Clothes Dryer Co., Worcester, Mass.

**DRYERS, COAL, CENTRIFUGAL.**

- Fuller-Lehigh Co., Fullerton, Pa.
- Link-Belt Company, Chicago and Philadelphia.

**DRYERS, ELECTRIC, FOR HAND AND FACE.**

- Corona Airdry, The Electric Towel—Airdry Corporation, Groton, N. Y.

**DRYERS, FERTILIZER AND GARBAGE.**

- Drake-Williams-Mount Co., Omaha, Neb.
- Hamler Boiler & Tank Co., Chicago, Ill.

**DRYERS, GRAIN.**

- Economy—Fitz Water Wheel Co., Hanover, Pa.
- Grupe Drier & Boiler Co., Davenport, Iowa.
- Hess—Hess Warming & Ventilating Co., Chicago, Ill.
- Strong-Scott Mfg. Co., Minneapolis, Minn.

**DRYERS, LAUNDRY, INDOOR.**

- American—American Clothes Dryer Co., New York.
- Chicago—Chicago Dryer Co., Chicago, Ill.
- Chicago Francis—Chicago Dryer Co., Chicago.
- Chicago Rapido—Chicago Dryer Co., Chicago.
- Dririte—Mannen, John E., Co., The, Cleveland, O.
- Family—W. W. McClain, Indianapolis, Ind.
- Favorite—Williamson Heater Co., Cincinnati, O.
- Hill—Hill Clothes Dryer Co., Worcester, Mass.
- Improved Appliance Co., Brooklyn, N. Y.
- Laun-Drier—The Williamson Heater Co., Cincinnati, O.
- Manest—Mannen, John E., Co., The, Cleveland, O.
- Scientific Heater Co., Cleveland, O.
- Tolhurst Machine Works, Troy, N. Y.

**DRYERS, METAL, CENTRIFUGAL.**

- American Tool & Machine Co., Boston, Mass.
- Centrifugal Dryer Co., Worcester, Mass.
- Link-Belt Company, Chicago and Philadelphia.
- No-Dust Drying Machine Co., Providence, R. I.
- Tolhurst Machine Works, Troy, N. Y.

**DRYERS, MISCELLANEOUS.**

- Alsing—J. R. Alsing Engineering Co., New York.
- Columbiana Boiler Co., Columbiana, Ohio. (asphalt, cement, sand, etc., cylindrical, drum and rotary).
- Groton Electrical Devices, Inc., (hair dryer and commercial dryer), Groton, N. Y.
- Lancaster Iron Works, Inc., Lancaster, Pa. (rotary).
- Perrin, Wm. R., & Co., Chicago, Ill. (steam jacketed).
- Proctor & Schwartz, Inc., Philadelphia, Pa. (board, cotton, brick and clay, cloth, hat, hair, paint, stocking, soap, tobacco, veneer, wool, yarn, bag, underwear, leather, chemical).

**DRYERS, MOLD, PORTABLE, ELECTRIC.**

- Dryers Sand—Indiana Foundry Co., Indiana, Pa.
- Hanna—Hanna Engineering Wks., Chicago.

**DRYERS, SAND.**

Cambridge Iron Works, Cambridge, Mass.  
 Hauck Mfg. Co., Brooklyn, N. Y.  
 Lewistown Foundry & Machine Co., Lewistown, Pa.  
 Sutton—Indiana Foundry & Machine Co., Indiana, Pa.  
 Zelnicker—Walter A. Zelnicker Supply Co., St. Louis, Mo.

**DRYERS, VACUUM.**

Bufokast—Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Devine Co., J. P., Buffalo, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Koven, L. O., & Bros., Jersey City, N. J.

**DRYERS, VAT.**

Iaco—Improved Appliance Co., Brooklyn, N. Y.

**DRYERS, WASTE HEAT.**

A. B. C. Sirocco—American Blower Co., Detroit, Bartlett & Snow Co., The C. O., Cleveland, O.  
 Green—The Green Fuel Economizer Co., Matteawan, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.

**DUCTS, VENTILATING, SHEET IRON.**

Canton Art Metal Co., Canton, O.  
 Crook, H. E., Co., Inc., Baltimore, Md.  
 Haines Co., The, Chicago, Ill.  
 New York Central Iron Works Co., Inc., Hagerstown, Md.

**DUMBWAITERS.**

Columbia—J. G. Spidel, Reading, Pa.  
 Energy Elevator Co., Philadelphia, Pa.  
 Kimball Bros. Co., Council Bluffs, Iowa.  
 McKenna—McKenna Brass & Mfg. Co., Pittsburgh, Pa.  
 Moffatt Machinery Mfg. Co., Charlotte, N. C.  
 O'Neill Elevator Co., Philadelphia, Pa.  
 Sedgwick Machine Works, New York, N. Y.  
 Standard Electric & Elevator Co., Baltimore, Md.  
 Storm Mfg. Co., The, Newark, N. J.  
 Warner Elevator Mfg. Co., Cincinnati, O.  
 Warsaw Elevator Co., Warsaw, N. Y.  
 Wheeler-McDowell Elevator Co., New York, N. Y.

**DYNAMITE.**

- ◆ Arctic—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- Atlas Powder Co., Wilmington, Del.
- ◆ Austin Powder Co., Cleveland, O.
- ◆ Forcite—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- ◆ Giant—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- Grasselli—Grasselli Powder Co., Cleveland, Ohio.
- Hercules—Hercules Powder Co., The, Wilmington, Del.
- ◆ Red Cross—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- ◆ Repauno—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- Xpdite Permissible Dynamite—The Hercules Powder Co., Wilmington, Del.

**DYNAMOMETERS.**

Diehl—Diehl Mfg. Co., Elizabeth, N. J.  
 Electric Specialty Co., Stamford, Conn.  
 Hartford Special Machinery Co., Hartford, Conn.  
 Herschell & Spillman Co., North Tonawanda, N. Y.  
 Queen & Co., Philadelphia.  
 Roth Bros. Co., Chicago, Ill.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Sprague Electric Co., New York, N. Y.

**DYNAMOS, ELECTRO-PLATING.**

Crocker-Wheeler Co., Ampere, N. J.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Electric Specialty Co., Stamford, Conn.  
 Fidelity Electric Co., Lancaster, Pa.  
 General Electric Co., Schenectady, N. Y.  
 H. & V. W.—Hanson & Van Winkle Co., The Newark, N. J.  
 Union Belt Co., Fall River, Mass.  
 U. S. Electro Galvanizing Co., Buffalo, N. Y.  
 Wagner Electric Mfg. Co., St. Louis, Mo.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**EARthenWARE, SANITARY. (POTTERS')**

Abingdon Sanitary Mfg. Co., The, Abingdon, Ill.  
 Acme Sanitary Pottery Co., Trenton, N. J.  
 Apex—Apex Sanitary Specialty Co., Trenton, N. J.  
 B. O. T. Mfg. Co., Trenton, N. J.  
 Bowers Pottery Co., Mannington, W. Va.

Capoco—Camden Pottery Co., Camden, N. J.  
 Chicago Pottery Co., Chicago, Ill.  
 Cochran, Drugan & Co., Trenton, N. J.  
 Douglas, John, Co., Cincinnati, O.  
 Eljer Co., Cameron, W. Va.  
 Elite Pottery Co., Trenton, N. J.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Florentine Pottery Co., The, Cambridge, O.  
 Ford's Porcelain Works, Perth Amboy, N. J.  
 Ironsides Pottery Co., Bordentown, N. J.  
 Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Keystone Pottery Co., Trenton, N. J.  
 Kokomo Sanitary Mfg. Co., Kokomo, Ind.  
 Lambertville Pottery Co., Lambertville, N. J.  
 Maddock & Sons, John, Trenton, N. J.  
 Maddock's Sons Co., Thos., Trenton, N. J.  
 Monument—Monument Pottery Co., Trenton, N. J.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 Pacific Porcelain Ware Co., San Francisco, Cal.  
 Penn Pottery Co., Philadelphia, Pa.  
 Potomac Pottery Co., Keyser, W. Va.  
 Resolute Pottery Co., Trenton, N. J.  
 Senco—The Sanitary Earthenware Specialty Co., Trenton, N. J.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Standard Sanitary Mfg. Co., Tiffin, O.  
 Standard Sanitary Pottery Co., The, Elizabeth, N. J.  
 Trenton Potteries Co., Trenton, N. J.  
 Universal Sanitary Mfg. Co., New Castle, Pa.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Wooster Sanitary Co., Clarksburg, W. Va.

**EARthenWARE, SHIPBUILDERS.**

Capoco—Camden Pottery Co., Camden, N. J.  
 Maddock's Sons Co., Thos., Trenton, N. J.  
 Trenton Potteries Co., Trenton, N. J.

**ECONOMIZERS, FUEL.**

American Power Co., New York, N. Y.  
 Automatic—Automatic Fuel Saving Co., Chicago.  
 Burnall—Burnall Fuel Saver Co., Chicago, Ill.  
 Coal Gas Carburetor—Triangle Sales Co., Philadelphia, Pa.  
 Eureka—Eureka Smokeless Furnace Co., Chicago, Ill.  
 Green—The Green Fuel Economizer Co., Beacon, N. Y.  
 King Kool Carburetor—Frederick Sabin & Co., Inc., Philadelphia, Pa.  
 Power Specialty Co., New York, N. Y.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Syracuse Industrial Gas Co., Syracuse, N. Y.  
 Water Arch Furnace Co., Chicago, Ill.  
 Wolff Coal Saver Co., Chicago, Ill.  
 Z. T. Soot & Gas Consumers Co., Oshkosh, Wis.

**EDGERS, METAL WORKING.**

Danzer Metal Works, Hagerstown, Md.  
 Grammes, L. F., & Sons, Allentown, Pa.

**EDGERS, SIDE.**

Bernz, Otto, Newark, N. J.

**EDGERS, WOODWORKING.**

(See also "Mach'y, Sawmill," and "Mach'y, Woodworking.")

Alco—Albany Iron Works, Albany, Ore.  
 American Saw Mill Machinery Co., Hackettstown, N. J.  
 Atlas Machine Co., Nashville, Tenn.  
 De Loach Mill Mfg. Co., Bridgeport, Ala.  
 Oxlie, Hill—Hill-Curtis Co., Kalamazoo, Mich.  
 General Supply & Machine Co., Meridian, Miss.  
 ◆ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Kline, Lewis T., Alpena, Mich.  
 Lane Mfg. Co., Montpelier, Vt. (gang).  
 Multnomah Iron Works, Portland, Ore.  
 Newman Machine Co., Greenboro, N. C.  
 Standard Saw Mill Machinery Co., Erie, Pa.  
 Tower—Gordon Hollow Blast Grate Co., Greenville, Mich.  
 United States Machine Co., Williamsport, Pa.  
 Wehrfritz—Wehrfritz Machinery & Supply Co., Little Rock, Ark.  
 Wheland—The Wheland Co., Chattanooga, Tenn. (Sawmill.)  
 Woods Engineering Co., The, Alliance, O.  
 Yates, F. P., Machine Co., Beloit, Wis.

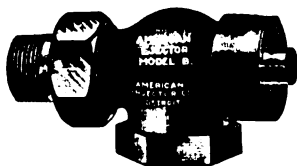
**EDGES, STRAIGHT.**

Athol Machine Co., Athol, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 ◆ Disston & Sons Co., Henry, Philadelphia, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Ohlen-Bishop Co., The, Columbus, Ohio.  
 Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Starrett Co., The L. S., Athol, Mass.  
 West Side—West Side Iron Works, Grand Rapids, Mich.



# "American" Ejector

For elevating and forcing liquids using steam, air or water as power. Extensively used in Creameries, Laundries, Dye Works, Paper Mills, Tanneries, by Chemical Manufacturers, and for priming Centrifugal Pumps.



**AMERICAN INJECTOR CO.**  
1481 Fourteenth St. DETROIT, MICH.

## EJECTORS.

- ♦ Advance Pump & Compressor Co., Battle Creek, Mich.
- ♦ American—American Injector Co., Detroit, Mich.
- Blakeslee—Blakeslee Mfg. Co., DuQuoin, Ill.
- Blakeslee—Standard Sanitary Mfg. Co., Pittsburg, Pa.
- Champion—Jas. A. Griffiths & Son, Philadelphia, Pa.
- ♦ Chicago—The Ohio Injector Co., Wadsworth, O.
- Coll's Patent—Tranter Mfg. Co., Pittsburg, Pa.
- Diamond Iron Works, Minneapolis, Minn.
- D. S.—Desmond—Stephen Mfg. Co., Urbana, O.
- Doll's Defiance—Tranter Mfg. Co., Pittsburg, Pa.
- Duriron—Duriron Company, Inc., Dayton, O.
- ♦ Eagle—Sherwood Mfg. Co., Buffalo, N. Y.
- Eureka—Kincaid Bros., Pittsburg, Pa.
- Fulton—Chaplin-Fulton Mfg. Co., Pittsburg, Pa.
- ♦ Garfield—The Ohio Injector Co., Wadsworth, O.
- Goulds Mfg. Co., Seneca Falls, N. Y.
- Griffiths, James A., Philadelphia.
- Hancock—The Hancock Inspirator Co., New York, N. Y.
- H-D—The Hayden & Derby Mfg. Co., New York, N. Y.
- Hennebelle Co., Chicago, Ill.
- Kerr Machinery Corp., Detroit, Mich.
- The Leader—The Kandle Machinery Co., Cincinnati, Ohio.
- ♦ Lunkenheimer Co., The Cincinnati, O.
- McDaniel—Watson & McDaniel Co., Philadelphia, Pa.
- McKnight—Tranter Mfg. Co., Pittsburg, Pa.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.
- Mason—Mason Regulator Co., Boston, Mass.
- Nathan Mfg. Co., New York, N. Y.
- O-S—The Gibson-Schlemmer Co., Cincinnati, O.
- Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.
- Premium—Maurer & Co., Wm., South Bend, Ind.
- Sheriff—Tranter Mfg. Co., Pittsburg, Pa.
- Straight Line—Beifeld Co., H., Philadelphia, Pa.
- Straight Line Regulator Co., Philadelphia, Pa.
- W-McD. & McDaniel—Watson & McDaniel Co., Philadelphia, Pa.
- ♦ X. L. 96—Penberthy—Penberthy Injector Co., Detroit, Mich. Steam, water, household, spray rig.)

## EJECTORS, ACID.

- Duriron—(Acid proof), The Duriron Co., Inc., Dayton, O.
- ♦ Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- ♦ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.

## EJECTORS, AUTOMATIC FOUL AIR.

- Elliott Co., Jeannette, Pa.
- Shipp, C. C. & Co., Indianapolis, Ind.

## EJECTORS, FOR ASHES.

- Brady, James A., Foundry Co., Chicago, Ill.
- Conveyors Corporation of America, Chicago, Ill.
- Koerting—Schutte & Koerting Co., Philadelphia.
- Lamy, A. & Son, Elizabeth, N. J.
- Marine Mfg. & Sup. Co., New York, N. Y.
- Portland Co., The, Portland, Me. (Marine).

## EJECTORS, SEWAGE.

- Ansonia Mfg. Co., New York, N. Y.
- Blackburn-Smith Corp., The, New York, N. Y.
- Buffalo Steam Pump Co., Buffalo, N. Y.
- Chicago Pump Co., The, Chicago, Ill.
- Economy—Economy Pumping Machinery Co., Chicago, Ill. (Automatic, Electric.)
- Ellis, Pat—The John Wieben Co., New York, N. Y.
- Erwin & Co., Chicago, Ill.
- IXL—The IXL Pump & Mfg. Co., Philadelphia, Pa.
- Jenkins—Jenkins Mfg. Co., New York, N. Y.
- P. F. T.—Pacific Flush Tank Co., Chicago, Ill.
- Priestman, Albert, Philadelphia, Pa.
- Shone—Yeomans Bros. Co., Chicago, Ill.

- S. M. S.—Sanitary Mechanical Specialty Co., New York, N. Y.
- "Simplex" Pneumatic—Simplex Ejector Co., Chicago, Ill.
- Waterpower—Merritt & Co., Camden, N. J.
- Wise, J. B., Watertown, N. Y.
- Wolverine Brass Works, Grand Rapids, Mich.

## ELBOWS, BATH TRAP, DOUBLE OPENING.

- Blake—Blake Specialty Co., Rock Island, Ill.

## ELBOWS, CAST IRON.

- (See "Fittings, Pipe, Cast Iron.")
- Little, M. S., Mfg. Co., Hartford, Conn.
- Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- Rome Sanitary Mfg. Co., Rome, N. Y.
- Standard Brass Mfg. Co., Utica, N. Y.
- Street & Kent Mfg. Co., Chicago, Ill.
- Union Brass & Metal Mfg. Co., St. Paul, Minn.

## ELBOWS AND OFFSETS, CLOSET TANK.

- Dallas Brass & Copper Co., Chicago, Ill.
- American Pin Co., Waterbury, Conn.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Beaton Mfg. Co., A. J., New Britain, Conn.
- Essex Foundry, Newark, N. J.
- Diamond Mfg. Co., Detroit, Mich.
- Frost Mfg. Co., The, Kenosha, Wis.
- Kelly & Jones Co., The, Greensburg, Pa.
- New Jersey Tube Co., New York.
- Powers Mfg. Co., J. P., Ossining, N. Y.
- Union Brass & Metal Mfg. Co., St. Paul, Minn.
- Waterbury Mfg. Co., Waterbury, Conn.
- Wise, J. B., Inc., Watertown, N. Y.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

## ELBOWS, EXPANSION.

- ♦ Powell, Wm. Co., The, Cincinnati, Ohio.

## ELBOWS, 45 AND 90 DEGREE.

- (See "Fittings, Pipe, Brass, Cast Iron, Malleable Iron.")

## ELBOWS, LAUNDRY TRAY.

- ♦ Detroit Brass & Malleable Works, Detroit, Mich.
- Fee & Mason Mfg Co., New York, N. Y.

## ELBOWS, PIPE, BRASS.

- Dallas Brass & Copper Co., Chicago, Ill.
- Exeter Brass Works, Exeter, N. H.
- Frost Mfg. Co., Kenosha, Wis.
- ♦ Richardson, Edro, Brass Co., Baltimore, Md.
- ♦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.
- ♦ Walworth Mfg. Co., Boston, Mass.

## ELBOWS, RUBBER.

- Bernz, Otto, Newark, N. J.
- Butterworth—Butterworth Supply Co., Philadelphia.
- Canfield—H. O. Canfield Co., Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn.
- Diamond—The Diamond Rubber Co., Akron, O.
- Frank Bros., New York, N. Y.
- Glauber Brass Mfg. Co., Cleveland, O.
- Good—Good Mfg. Co., Inc., New York, N. Y.
- ♦ Goodrich, B. F., Co., The, Akron, O.
- Monarch Brass Co., The, Cleveland, O.
- New Red—Geo. W. Helland, New York.
- Norwalk Mfg. Co., East Norwalk, Conn.
- 1901—H. O. Canfield Co., Bridgeport, Conn.
- Quaker City Rubber Co., Philadelphia, Pa.
- ♦ Republic Rubber Corp., The, Youngstown, O.
- Sexauer, J. A., Mfg. Co., New York.
- Ricketts—J. J. Ricketts, Pittsburg, Pa.
- Shield Brand—M. Glauber & Co., New York, N. Y.
- Superior—Superior Mfg. Co., Chicago, Ill.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

## ELBOWS, SLIP JOINT FLUX.

- American Foundry & Mfg. Co., St. Louis, Mo.
- Cochran Brass Mfg. Co., J. A., Cleveland, Ohio.
- Dearborn Brass Co., Cedar Rapids, Ia.
- Milwaukee Brass Mfg. Co., Milwaukee, Wis.
- New Jersey Tube Co., New York.
- ♦ Powell, Wm., Co., The, Cincinnati, O.
- Powers Mfg. Co., J. P., Ossining, N. Y.
- Richardson, Edro, Brass Co., Baltimore, Md.
- Standard Brass Mfg. Co., Utica, N. Y.
- Union Brass & Metal Mfg. Co., St. Paul, Minn.
- Union Metal Works, Chelsea, Mass.
- Wise, J. B., Inc., Watertown, N. Y.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

## ELBOWS, STREET.

- Exeter Brass Works, Exeter, N. H.
- Glauber Brass Mfg. Co., Cleveland, O.
- Illinois Malleable Iron Co., Chicago, Ill.

- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- ◆ Richardson, Edw., Brass Co., Baltimore, Md.
- ◆ Walworth Mfg. Co., Boston, Mass.

#### ELBOWS, UNION.

- Acheson Mfg. Co., Braddock, Pa.
- Beaton & Cadwell Mfg. Co., New Britain, Conn.
- Capitol Brass Works, Detroit, Mich.
- Dart Mfg. Co., E. M., Providence, R. I.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Eureka—Eureka Brass Works, Inc., Cincinnati, O.
- Exeter Brass Works, Exeter, N. H.
- Flagg & Co., Stanley G., Philadelphia, Pa.
- Fries & Co., Buffalo, N. Y.
- Garrett & Co., W. T., San Francisco, Cal.
- Grip—Ware Coupling & Nipple Co., Ware, Mass.
- Glauber Brass Mfg. Co., Cleveland, O.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Hammond—Hammond Brass Works, Chicago, Ill.
- Haydenville Co., The, Haydenville, Mass.
- Hutchison—Hutchison Vapor Heating Co., Washington, D. C.
- Illinois Malleable Iron Co., Chicago, Ill.
- ◆ Jefferson Union Co., Lexington, Mass.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Lavigne—Commonwealth Brass Co., Detroit, Mich.
- McDonald Mfg. Co., Dubuque, Ia.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ McKee & Roberts Co., Detroit, Mich.
- Milwaukee Valve Co., Milwaukee, Wis.
- ◆ Michigan—Roe Stephens Mfg. Co., Detroit, Mich.
- N. T. C.—National Tube Co., Pittsburgh, Pa.
- ◆ O-B—The Ohio Brass Co., Mansfield, O.
- Penn Engineering Co., The, Philadelphia, Pa.
- Pittsburgh Valve & Fittings Co., Barberton, O.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Richardson, Edw., Brass Co., Baltimore, Md.
- Rhode Island—Rhode Island Fittings Co., Hill Grove, R. I. (Bronze seat.)
- ◆ Scott—Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Walworth Mfg. Co., Boston, Mass.

#### ELECTRIC LIGHTING PLANTS, STEAM TURBO-GENERATOR.

- Buda Ross—Buda Co., The, Chicago, Ill.
- Steam Motors Co., The, Springfield, Mass.

#### ELECTRIC LIGHTING AND POWER PLANTS FOR COUNTRY HOMES.

- A. C. Electrical Mfg. Co., Dayton, Ohio.
- Bond Bros., Spencerville, Md.
- Comet—Comet Electric Co., Indianapolis, Ind.
- Cushman "Does More"—Cushman Motor Works, Lincoln, Neb.
- Delco-Light—Delco-Light Company, Dayton, Ohio.
- Dutcher Machine Co., Inc., Fulton, N. Y.
- Fairbanks, Morse & Co., Chicago, Ill.
- Frost Engine Co., Evansville, Wis.
- Fuller & Johnson Mfg. Co., Madison, Wis.
- Genco Light—General Gas-Electric Co., Hanover, Pa.
- Ingeco—Worthington Pump & Machinery Corp., Cudahy, Wis.
- ◆ Jeffrey Mfg. Co., Columbus, O.
- Kewanee—Kewanee Private Utilities Co., Kewanee, Ill.
- ◆ Kohler—Kohler Co., Kohler, Wis.
- Lalley Light—Lalley Light Corp., Detroit, Mich.
- Lucey Mfg. Corp., New York.
- Lucolite—Lucas Mfg. Co., York, Pa.
- Matthews—Consolidated Utilities Corp., Chicago, Ill.
- McDonald, A. Y., Mfg. Co., Dubuque, Iowa.
- Milburn—Alexander Milburn Co., Baltimore, Md.
- North American Engine Co., Algona, Ia.
- Owen, R. M., & Co., Chicago, Ill.
- Peerless Light Co., Chicago, Ill.
- Premier—Premier Electric Co., Chicago, Ill.
- Regal Gasoline Engine Co., Coldwater, Mich.
- Rohaco—Roberts-Hamilton Co., Minneapolis, Minn.
- Regal—Regal Gasoline Engine Co., Coldwater, Mich.
- Silent-Alamo—Alamo Farm Light Co., Chicago, Ill.
- Stearns De Luxe, Stearns Simplex—Stearns Motor Mfg. Co., Ludington, Mich.
- Sumner Engine Co., Fairmont, Minn.
- Swartz Electric Co., Indianapolis, Ind.
- United—United Engine Co., Lansing, Mich.
- Universal Motor Co., Oshkosh, Wis.
- Utility—Gile Tractor & Engine Co., Ludington, Mich.
- Western Electric Co., Inc., Chicago, Ill.
- Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Wisconsin—Lawson-Lawton Co., De Pere, Wis.

#### ELECTROPLATING, TO ORDER.

- A. B. C. Plating Works, Chicago, Ill.
- Amber Plating Works, Chicago, Ill.
- American Brass Novelty Co., Grand Haven, Mich.
- American Plate-Enamel Co., Chicago, Ill.
- Brey & Krause Mfg. Co., Allentown, Pa.
- Handy Plating Shop, Chicago, Ill.
- Hodgdon Brass Works, The, Boston, Mass.
- Improved Appliance Co., Brooklyn, N. Y.
- Little, M. S., Mfg. Co., Hartford, Conn.
- Maltby, Geo. W., & Sons Co., Buffalo, N. Y.

- Matthews, H. A., Mfg. Co., Seymour, Conn.
- Newman Mfg. Co., The, Cincinnati, O.
- Standard Brass Mfg. Co., Utica, N. Y.
- St. Louis Brass Mfg. Co., St. Louis, Mo.
- Two Rivers Plating Works, Two Rivers, Mich.
- Worcester Pressed Steel Co., Worcester, Mass.
- Zenith Plating Works, Inc., Chicago, Ill.

#### ELEVATORS, AUTOMATIC TRAY.

- Amco—Alvey Mfg. Co., St. Louis, Mo.
- Haslett Spiral Chute Co., Philadelphia, Pa.

#### ELEVATORS, BARREL.

- Jeffrey Mfg. Co., Columbus, O.
- ◆ Webster Mfg. Co., The, Chicago, Ill.

#### ELEVATORS, BUCKET.

- A. C. Co.—Arnold-Creager Co., The, New London, Ohio.
- Amco—Alvey Mfg. Co., St. Louis, Mo.
- American—American Hoist & Derrick Co., St. Paul, Minn.
- Atlas Machine Co., Nashville, Tenn.
- Batavia Engineering Works, Batavia, Ill.
- Caldwell & Son Co., H. W., Chicago, Ill.
- ◆ Chain Belt Co., Milwaukee, Wis.
- Gutta Percha & Rubber Mfg. Co., New York.
- Howe Chain Co., Muskegon, Mich.
- ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- Link-Belt Company, Chicago and Philadelphia
- McKinney-Harrington Co., North Chicago, Ill.
- Main Belting Co., Philadelphia, Pa.
- Pangborn Corp., Hagerstown, Md.
- Pittsburgh Conveying Machinery Co., Philadelphia
- Reliable—Universal Road Machinery Co., Kingston, N. Y.
- Robins Conveying Belt Co., New York, N. Y.
- Sackett Screen & Chute Co., Chicago, Ill.
- Specialty Engineering Co., Philadelphia, Pa.
- Stephens-Adamson Mfg. Co., Aurora, Ill.
- Waller Mfg. Co., Chicago, Ill.
- ◆ Webster Mfg. Co., Chicago, Ill.
- Wolf Co., The, Chambersburg, Pa.

#### ELEVATORS, BUILDING MATERIAL.

- Boss—American Cement Machine Co., Inc., Keokuk, Ia.
- Byers, John F., Machine Co., Ravenna, O.
- C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.
- Grand Rapids Vapor Kiln Co., Grand Rapids, Mich.
- Moloch Company, Kaukauna, Wis.
- Root, B. M. Co., York, Pa.
- Standard Conveyor Co., North St. Paul, Minn.

#### ELEVATORS, ELECTRIC COIN.

- Wheeler-McDowell Elevator Co., New York.

#### ELEVATORS, EMPLOYES.

- Wolf Company, The, Chambersburg, Pa.

#### ELEVATORS, GRAIN, PNEUMATIC.

- Liberty Grain Blower—Link Mfg. Co., Kansas City, Mo.

#### ELEVATORS, HAND POWER.

- Decatur Foundry, Furnace & Machine Co., Decatur, Ind.
- Grote—F. Grote Mfg. Co., Evansville, Ind.
- Jordan—Jordan Bros., Inc., New York (sidewalk).
- Kimball Bros. Co., Council Bluffs, Iowa.
- Lamson Co., Boston, Mass.
- Moffat Machinery Mfg. Co., Charlotte, N. C.
- Otis Elevator Co., New York, N. Y.
- Philadelphia Elevator Co., Philadelphia.
- Revolutor—New York Revolving Portable Elevator Co., Jersey City, N. J.
- Sedgwick Machine Works, New York.
- Sidney Elevator Mfg. Co., Sidney, O.
- Smith, C. W., Buffalo, N. Y.
- Smith-Rhea Co., Baltimore, Md.
- Spidel, J. G., Reading, Pa.
- Standard Electric & Elevator Co., Baltimore, Md.
- Storm Mfg. Co., The, Newark, N. J.
- Warsaw Elevator Co., Warsaw, N. Y.

#### ELEVATORS, HYDRAULIC.

- Abendroth & Root Mfg. Co., Newburgh, N. Y. (gravel).
- American Machine Co., Louisville, Ky.
- Kerrihard Co., Red Oak, Ia. (freight).
- Otis Elevator Co., New York, N. Y.
- Ridgway, C., & Son Co., Coatesville, Pa.
- Smith-Rhea Co., Baltimore, Md.
- Union Engineering Co., Cleveland, O.

#### ELEVATORS, ICE.

- Curtis & Co. Mfg. Co., St. Louis, Mo.
- Gifford-Wood Co., Hudson, N. Y.
- ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- Link-Belt Company, Chicago and Philadelphia.

#### ELEVATORS, LUMBER.

- Root Co., B. M., York, Pa.

**ELEVATORS, FILERS OR STACKERS, PORTABLE.**

- Alvey Mfg. Co., St. Louis, Mo.  
 Barber-Greene Co., Aurora, Ill.  
 Brown-Brown Portable Elevator Co., Chicago.  
 Economy Engineering Co., Chicago, Ill.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Lowerator-Richards-Wikeox Mfg. Co., Aurora, Ill.  
 McKinney-Harrington Co., North Chicago, Ill.  
 New Jersey Foundry & Machine Co., New York, N. Y.  
 Revolver-New York Revolving Portable Elevator Co., Jersey City, N. J.  
 Standard Conveyor Co., North St. Paul, Minn.  
 The L. S. Stacker-Lewis Shepard Co., Boston, Mass.  
 ♦ Webster Mfg. Co., Chicago, Ill.

**ELEVATORS, SIDEWALK.**

Energy Elevator Co., Philadelphia, Pa.  
 Ernst, Charles K., Buffalo, N. Y.  
 Grote, F. Mfg. Co., Evansville, Ind.  
 Jordan Bros., Inc., New York, N. Y.  
 Kimball Bros. Co., Council Bluffs, Iowa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Philadelphia Elevator Co., Philadelphia, Pa.  
 Sedgwick Machine Works, New York, N. Y.  
 Smith-Rhea Co., Baltimore, Md.  
 Spidel, J. G., Reading, Pa.  
 Storm Mfg. Co., The, Newark, N. J.

**ELEVATORS, TRAY.**

- ♦ Jeffrey Mfg. Co., Columbus, Ohio.  
 Link-Belt Company, Chicago and Philadelphia, Pa.

**ELEVATORS, TUBING, OIL WELL AND SUCKER ROD.**

Dunn-Dunn Mfg. Co., Oxnard, Calif.

**ELEVATORS, WELL CASING.**

Dunn-Dunn Mfg. Co., Oxnard, Calif.  
 Jarecki Mfg. Co., Erie, Pa.  
 Leidecker Tool Co., Marietta, O.

**EMERY, CAKE & POWDER, FLOUR & GRAIN.**

- Abrasive Company, Philadelphia, Pa.  
 American Emery Wheel Works, Providence, R. I.  
 Artificial Abrasive-Abrasive Mining & Mfg. Co., Plymouth, Ind.  
 ♦ Alundum, Crystolene-Norton Co., Worcester, Mass.  
 American-Keystone Emery Mills, Philadelphia, Pa.  
 Day, S. A., Mfg. Co., Buffalo, N. Y.  
 Genuine-Keystone Emery Mills, Philadelphia, Pa.  
 H. & V. W.-Hanson & Van Winkle Co., Newark, N. J.  
 Hamilton Mills-Hamilton Emery & Corundum Co., Chester, Mass.  
 Munning, A. P. & Co., New York, N. Y.  
 Niagara Emery Mills, Inc., New York, N. Y.  
 Occidental-Abrasive Mining & Mfg. Co., Plymouth, Ind.  
 Oriental Emery Co., New Haven, Conn.  
 Ottoman-H. A. Stiles & Co., Boston, Mass.  
 Pure-Keystone Emery Mills, Philadelphia, Pa.  
 Scimitar-Sultan-Abrasive Mining & Mfg. Co., Plymouth, Ind.  
 Stiles, H. A. & Co., Boston, Mass.  
 Sultan-Best, L. & Co., New York, N. Y.  
 Tanite Co., The, Stroudsburg, Pa.  
 Turkish-Keystone Emery Mills, Philadelphia, Pa.  
 Washington Mills Emery Mfg. Co., North Grafton, Mass.

**ENAMEL, BATH TUB.**

Pecora-Pecora Paint Co., Philadelphia, Pa.  
 Porcelite-The Thompson Wood Finishing Co., Philadelphia, Pa.  
 Porcelain Enamel-Rinald Bros., Philadelphia, Pa.

**ENAMEL, RADIATOR.**

- (See also "Bronze Powders and Liquids.")  
 Acme Quality-Acme White Lead & Color Works, Detroit, Mich.  
 Bronze Powder Works Co., Elizabeth, N. J.  
 Connors, Wm., Paint Mfg. Co., Troy, N. Y.  
 Fuchs & Lang Mfg. Co., Chicago, Ill.  
 Nubian Paint & Varnish Co., The, Chicago, Ill.  
 Pecora-Pecora Paint Co., Philadelphia, Pa.  
 Ripolin-J. A. & S. Bird Co., Boston, Mass.  
 Sapolin-Gerstendorfer Bros., New York, N. Y.

**ENAMELING, PORCELAIN, FOR THE TRADE.**

Bauch Range & Enameling Co., Chicago, Ill.  
 Chattanooga Stamping & Enameling Co., Chattanooga, Tenn.  
 Gauder, Paeschke & Frey Co., Milwaukee, Wis.  
 Greenpoint Enameling Works, Brooklyn, N. Y.  
 Ingram-Richardson Mfg. Co., Beaver Falls, Pa.  
 Modern Iron Works, Quincy, Ill.  
 Oakes Pressed Steel Co., Indianapolis, Ind.  
 Richmond Radiator Co., New York, N. Y.  
 Russell, John M., Mfg. Co., Inc., Naugatuck, Conn.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.

**ENDS, ROSE BIRD.**

- Acheson Mfg. Co., Braddock, Pa.  
 Briggs, Inc., William, Brooklyn, N. Y.  
 Burlington-Burlington Brass Works, Burlington, Wis.  
 Fries & Co., Buffalo, N. Y.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wise, J. B., Inc., Watertown, N. Y.

**ENDS, ROD, FOR MACHINERY.**

- ♦ B. & S.-The Billings & Spencer Co., Hartford, Conn.

**ENDS, SAFE, FOR BOILER TUBES.**

Detroit Seamless Steel Tube Co., Detroit, Mich.  
 National & Shelby-National Tube Co., Pittsburgh, Pa.  
 Pittsburg Steel Products Co., Pittsburg, Pa.

**ENGINES, ALCOHOL.**

International Harvester Co., Chicago, Ill.  
 Jack-of-all-Trades-Fairbanks, Morse & Co., Chicago.  
 Miami-The Middletown Machine Co., Middletown, O.  
 Nichols Power Co., Inc., Stamford, Conn.

**ENGINES, BEATING, PAPER AND PULP MILL.**

(See also, "Machinery, Paper & Pulp Mill.")  
 Dayton-Globe Iron Works Co., The, Dayton, O.  
 Jordan-Noble & Wood Machine Co., Hoosick Falls, N. Y.  
 Mills Machine Co., Laurence, Mass.  
 Valley Iron Works Co., Appleton, Wis.

**ENGINES, BLOWING.**

Allis-Chalmers Co., Milwaukee, Wis.  
 Birmingham Machine & Foundry Co., Birmingham, Ala.  
 Bruce-Macbeth Engine Co., Cleveland, O.  
 Hoover-Owens-Rentschler Co., Hamilton, O.  
 Lane & Bodley Co., The, Cincinnati, O.  
 Mesta Machine Co., Pittsburg, Pa.  
 Morris Co., I. P., Philadelphia, Pa.  
 Nordberg-Nordberg Mfg. Co., Milwaukee, Wis.  
 Power & Mining Mach. Co., New York, N. Y.  
 Russell Engine Co., Massillon, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Tod Co., Wm., Youngstown, O.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Welmer-Welmer Machine Works Co., Lebanon, Pa.  
 Wickes Bros., Saginaw, Mich.  
 Wisconsin Engine Co., Corliss, Wis.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**ENGINES, DIESEL, CRUDE OIL.**

Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
 Busch-Sulzer Bros., St. Louis, Mo.  
 Dow Pump & Diesel Engine Co., San Francisco, Cal.  
 Fultor Iron Works Co., St. Louis, Mo.  
 Jacobson Engineering Co., Inc., New York.  
 Loomis, A. O., Larimer, Pa.  
 McIntosh & Seymour-McIntosh & Seymour Corp., Auburn, N. Y.  
 Nordberg Mfg. Co., Milwaukee, Wis.  
 Semi-Diesel-Chicago Pneumatic Tool Co., New York.  
 Transit-National Transit Pump & Machine Co., Oil City, Pa.  
 Venn-Severin-Venn Severin Machine Co., Chicago, Ill.  
 Western Machinery Co., Los Angeles, Cal.

**ENGINES, DISTILLATE.**

(See "Engines, Gas, Gasoline and Oil.")

**ENGINES, DREDGE DOCK.**

Charter-Charter Gas Engine Co., Sterling, Ill.  
 Superior Iron Works Co., Superior, Wis.

**ENGINES, OR MOTORS, GAS, GASOLINE, KEROSENE AND OIL, STATIONARY.**

Acme-Jones, S. M. Co., The, Toledo, O.  
 Adams-Wisconsin Engine Co., The, Corliss, Wis.  
 Aermotor Co., Chicago, Ill.  
 Alamo-Alamo Engine Co., The, Hillsdale, Mich.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 American Clay Machinery Co., Bucyrus, O.  
 American Clutch Co., Amesbury, Mass.  
 American-American Engine Co., Detroit, Mich.  
 Anderson-Anderson Foundry & Machine Works, Anderson, Ind.  
 Andrew Motor Mfg. Co., Milwaukee, Wis.  
 Antigo-International Holist Co., Antigo, Wis.  
 Appleton Mfg. Co., Batavia, Ill.  
 Arnold-G. W. Arnold's Son, Ionia, Mich.

- Associated Manufacturers' Co., Waterloo, Iowa.  
**Atlas**—San Antonio Machine & Supply Co., San Antonio, Tex.  
**Atlas**—Imperial Engine Co., Oakland, Cal.  
**Auglaize**—Muncie Gas Engine & Supply Co., Muncie, Ind.  
**Backus**—Backus Water Motor Co., Newark, N. J.  
**Badger**—Badger Gas & Gasoline Engine Co., Kansas City, Kan.  
**Baker**—The Heller-Aller Co., Napoleon, O.  
**Baker Mfg. Co.**, Evansville, Wis.  
**Barker Factory**, The, Norwalk, Conn.  
**Bartlett Hayward Co.**, The, Baltimore, Md.  
**Bates & Edmonds Motor Co.**, Lansing, Mich.  
**Bay City Iron Co.**, Bay City, Mich.  
**Baystate Machine Co.**, Erie, Pa.  
**Beilfus Motor Co.**, The, Lansing, Mich.  
 ♦ **Bethlehem Steel Co.**, South Bethlehem, Pa.  
**Birmingham**—White-Blakeslee Mfg. Co., Birmingham, Ala.  
**Bishop-Babcock-Becker Co.**, The, Cleveland, O.  
**Blakeslee**—American-Blakeslee Mfg. Co., Birmingham, Ala.  
**Bond Bros.**, Spencerville, Md. (pumping).  
**Brighton**—Pittsburg Machine Co., New Brighton, Pa.  
**Brownwall, Holland**—Holland Engine Co., Inc., Holland, Mich.  
**Bruce-Macbeth**—The Bruce-Macbeth Engine Co., Cleveland, O.  
**Buckeye Engine Co.**, Salem, O.  
**Buffalo Engine Co.**, Buffalo, N. Y.  
**Bulldog**—Althoff Mfg. Co., Denver, Colo.  
**Bull Dog**—Bates & Edmonds Motor Co., Lansing, Mich.  
**Burlingame**, S. F., Worcester, Mass.  
**Caillé Perfection Motor Co.**, The, Detroit, Mich.  
**Callahan**—W. P. Callahan Co., The, Dayton, O.  
**Capital Jr.**—C. H. A. Dissinger & Co., Lancaster, Pa.  
**Castle**—A. M. Castle Engineering Co., La Crosse, Wis.  
**C. H. & E. Manufacturing Co., Inc.**, Milwaukee, Wis.  
**Central City Iron Works, Stevens Point**, Wis.  
**Challenge**—Challenge Co., Batavia, Ill.  
**Chapman**, H. L., Marcellus, Mich.  
**Charter Type R**—Charter Gas Engine Co., Sterling, Ill.  
**Chuse**—Chuse Engine & Mfg. Co., Mattoon, Ill.  
**Clark Engine & Boiler Co.**, Kalamazoo, Mich.  
**Commercial Engine Co.**, Los Angeles, Cal.  
**Cooper**—The G. C. Cooper Co., Mount Vernon, O.  
**Craig, James**, Jersey City, N. J.  
**Cushman**—Cushman Motor Co., Lincoln, Neb.  
**Davenport** (Hoid Type), Davenport Mfg. Co., Inc., Davenport, Iowa.  
**De-La-Vergne**—De La Vergne Machine Co., New York, N. Y.  
**De Loach Mill Mfg. Co.**, Chattanooga, Tenn.  
**Dempster**—Dempster Mill Mfg. Co., Beatrice, Neb.  
**Deyo**—Lackawanna Mfg. Co., New York, N. Y.  
**Diamond**—Diamond Iron Works, Minneapolis, Minn.  
**Doak Gas Engine Co.**, Oakland, Cal.  
**Dodge** (Burnoil) Dodge Sales & Engineering Co., Mishawaka, Ind.  
**Domestic**—Domestic Engine & Pump Co., Shippenburg, Pa.  
**Double Efficiency**—Fuller & Johnson, Madison, Wis.  
**Dow Pump & Diesel Engine Co.**, San Francisco, Cal.  
 ♦ **DuBois**—DuBois Iron Works, DuBois, Pa.  
**Eagle Mfg. Co.**, Appleton, Wis.  
**Economy**—The Pattin Bros. Co., Marietta, O.  
**Eli**—The Edgar A. Wilhelm Co., New York, N. Y.  
**Ellis**—Ellis Engine Co., Detroit, Mich.  
**Elyria**—Elyria Gas Power Co., Elyria, O.  
 ♦ **Fairbanks-Morse**—Fairbanks, Morse & Co., Chicago, Ill.  
**Farquhar**, A. B. Co., Ltd., York, Pa.  
**Fisher**—Loane Engineering Co., Baltimore, Md.  
**Foos**—The Foos Gas Engine Co., Springfield, O.  
**"Franklin Valveless"**—Franklin Valveless Engine Co., Franklin, Pa.  
**Frisbie Motor**—Frisbie Motor Co., Middletown, Conn.  
**Frisco Standard**—Standard Gas Engine Co., Oakland, Calif.  
**Frost Engine Co.**, Evansville, Wis.  
**Frost King**—John Lauson Mfg. Co., New Holstein, Wis.  
**Fuller & Johnson Mfg. Co.**, Madison, Wis.  
**Fulton Mfg. Co.**, Erie, Pa.  
**Gade**—Gade Bros. Mfg. Co., Iowa Falls, Ia.  
**Galloway Co.**, The Wm., Waterloo, Ia.  
**Gem**—Elbridge Engine Co., Rochester, N. Y.  
**G. G.**—Gulowsen Sales Corp., Seattle, Wash.  
**Giant**—Chicago Pneumatic Tool Co., New York.  
**Gilson**—Gilson Mfg. Co., Port Washington, Wis.  
**Godfrey-Keeler Co.**, New York, N. Y.  
**Gray**—Gray Motor Co., Detroit, Mich.  
**Great Western**—Smith Mfg. Co., Chicago, Ill.  
**Hadfield**—Penfield Steel Co., The, Bucyrus, Ohio.  
**Hagan Gas Engine Co.**, Winchester, Ky.  
**Hamilton**—Advance Mfg. Co., Hamilton, O.  
**Hartig Standard Gas Engine Co.**, Newark, N. J.  
**Hatch**, American, International—Hatch Oil Engine Co., New London, Conn. (oil).  
**Hercules Motor Mfg. Co.**, Canton, O.  
**Hercules**—The Hercules Corp., Evansville, Ind.  
**Hicks Iron Works**, San Francisco, Calif.  
**Holt Mfg. Co.**, Stockton, Cal.  
**Honest Clay**—Clay Engine Mfg. Co., Cleveland, O.  
**Hope Engineering & Supply Co.**, Pittsburg, Pa.  
**Hope Forge & Machine Co.**, The, Mt. Vernon, O.  
**Hooster**—Flint & Walling Mfg. Co., Kendallville, Ind.  
**Howell**—R. R. Howell & Co., Minneapolis, Minn.  
**Huber Mfg. Co.**, The, Marion, O.  
**Hubbard Motor Co.**, The, Middletown, Conn.  
**Ideal**—Ideal Engine Co., Lansing, Mich.  
**Ingeco**—Worthington Pump & Machinery Corp., Cudahy, Wis.  
**Ingersoll-Rand Co.**, New York.  
**J. C.**—The Titusville Iron Works, Titusville, Pa.  
**Jack-of-all-Trades**—Fairbanks, Morse & Co., Chicago.  
**Jacobson, Jr.**—Jacobson Gas Engine Co., Albany, N. Y.  
**Johnson Co.**, The, Lorain, O.  
**Johnston & Jennings Co.**, Cleveland, O.  
**Jones**—Huntsville Foundry & Machine Works, Huntsville, Ala.  
**Kahlenberg**—Kahlenberg Bros. Co., Two Rivers, Wis.  
**Kalamazoo**—Burt Mfg. Co., Kalamazoo, Mich.  
**Kalamazoo Gasoline Engine Works**, Kalamazoo, Mich.  
**Kewanee**—Kewanee Water Supply Co., Kewanee, Ill.  
**Krueger, Atlas**—San Antonio Machine & Supply Co., San Antonio, Tex.  
**Lansing Motor & Pump Co.**, Lansing, Mich.  
**Lauson**—John Lauson Mfg. Co., New Holstein, Wis.  
**Lazier**—Lazier Gas Engine Co., Buffalo, N. Y.  
**Leader Iron Works**, Decatur, Ill.  
**Leader-Ospraymo**—Field Force Pump Co., Elmira, N. Y.  
**Leavitt Mfg. Co.**, Urbana, Ill.  
**Lennox Machine Works**, The, Marshalltown, Ia.  
**Le Roi Co.**, Milwaukee, Wis.  
**Little Giant**—The Portsmouth Engine Co., Portsmouth, O.  
**Loane**—Loane Engineering Co., Baltimore, Md.  
**Longlife**—Plymouth Metal Products Co., Plymouth, Wis.  
**Manley**—United Engine & Mfg. Co., Hanover, Pa.  
**McEwen Mfg. Company**, Tulsa, Okla.  
**McEwen Bros.**, Wellsville, N. Y.  
**McLaughlin Mfg. Co.**, Geo. C., Boston, Mass.  
**Mesta**—Mesta Machine Co., The, Pittsburg, Pa.  
**Miami**—The Middletown Machine Co., Middletown, O.  
**Mianus Motor Works**, Stamford, Conn.  
**Michigan**—National Engineering Co., Saginaw, Mich.  
**Mietz, August**, Corp., New York, N. Y.  
**Middletown Machine Co.**, Middletown, O. (pumping).  
**Miller**—The Miller Improved Gas Engine Co., Springfield, O.  
**Monarch**—American Scale Co., Kansas City, Mo.  
**Monarch**—Grand Rapids Gasoline Engine Co., Grand Rapids, Mich.  
**Monarch**—H. N. Strait Mfg. Co., Kansas City, Mo.  
**Monitor**—Baker Mfg. Co., Evansville, Wis.  
**Mukuntotor**—Fuller & Johnson, Madison, Wis. (small).  
**Nagle-Corliss**—Nagle Corliss Engine Works, Erie, Pa.  
**National Transit**—National Transit Pump & Machine Co., Oil City, Pa.  
**Nelson Bros. Co.**, Saginaw, Mich.  
**Niesco Diesel**—New London Ship & Engine Co., Groton, Conn.  
**New Brown**—Brown Engine Co., Fitchburg, Mass.  
**New Holland**—New Holland Machine Co., New Holland, Pa.  
**New Era**—The Portsmouth Engine Co., Portsmouth, O.  
**New Model**—National Engineering Co., Saginaw, Mich.  
**New Way**—The New Way Motor Co., Lansing, Mich.  
**New York Blower Co.**, Chicago, Ill.  
**New York Engine Co.**, New York, N. Y.  
**Nichols Power Co., Inc.**, Stamford, Conn.  
**Nordberg Mfg. Co.**, Milwaukee, Wis.  
**North American Engine Co.**, Algona, Ia.  
**Northway Motor & Mfg. Co.**, Detroit, Mich.  
**Northwestern Steel & Iron Works**, Eau Claire, Wis.  
**Novo**—Novo Engine Co., Lansing, Mich.  
**Ohio Engine Co.**, The, Sandusky, O.  
**Ohio Motor Co.**, The, Sandusky, O.  
**Ohio Valley Supply Co.**, The, Marietta, O.  
**Oil City Boiler Works**, Oil City, Pa.  
**Oil Well Supply Co.**, Pittsburg, Pa.  
**Okey Mfg. Co.**, Columbus, O.  
**Olds**—Reliance Engineering Co., Lansing, Mich.  
**Olin**—Olin Gas Engine Co., Inc., Buffalo, N. Y.  
**Olin**—The Titusville Iron Works Co., Titusville, Pa.  
**Ottawa Mfg. Co.**, Ottawa, Kans.  
**Orr & Sombower**, Inc., Reading, Pa.  
**Otto**—Otto Engine Mfg. Co., Philadelphia, Pa.  
**Palmer**—Palmer Bros., Coscob, Conn.  
**Parker**, S. E., Chicago, Ill.  
**Perkins Windmill & Engine Co.**, Mishawaka, Ind.  
**Pittsburgh Filter & Eng. Co.**, Pittsburgh, Pa.  
**Pittsburgh Pump and Supply Co.**, Pittsburgh, Pa.  
**Plunket Jr.**—J. E. Plunket, Chicago, Ill.  
 ♦ **Powell, Wm., The Co.**, Cincinnati, O.  
**Power & Mining Machine Co.**, New York, N. Y.  
**Price Pump & Engine Co.**, G. W., San Francisco, Cal.  
**Primm**—The Power Mfg. Co., Marion, O.  
**Quayle**—Commonwealth Motors Co., Chicago, Ill.  
**Quick & Thomas Co.**, Auburn, N. Y.  
**Raquette Fdy. & Supply Co.**, Massena, N. Y.  
**Rathbun**—The Rathbun-Jones Engineering Co., Toledo, O.  
**Reeco**—Rider-Ericsson Engine Co., New York, N. Y.  
**Reliable**—Heer—The Reliable Tractor and Engine Co., Portsmouth, O.

- Reid Gas Engine Co., Joseph, Oil City, Pa.  
 Remington—The Remington Oil Engine Co., Stamford, Conn.  
 Ritchie—Advance Mfg. Co., Hamilton, O.  
 Roberts—The Roberts Motor Co., Sandusky, O.  
 Rochester Gas Engine Co., Rochester, N. Y.  
 Rodefild Mfg. Co., Richmond, Ind.  
 R. & V. Triumph—Root & Van Dervoort Engineering Co., East Moline, Ill.  
 Salisbury—Buffalo Engine Co., Buffalo, N. Y.  
 Salisbury Foundry & Machine Co., Salisbury, Md.  
 Schenck Mfg. & Supply Co., Parkers Landing, Pa.  
 Schramm, Chris D., & Sons, Inc., Philadelphia, Pa.  
 Scripps—Scripps Motor Co., Detroit, Mich.  
 Service—Rochester Motors Co., Rochester, N. Y.  
 Sheldon—Sheldon Engine & Sales Co., Waterloo, Iowa.  
 Shortt—W. M. Ryan Co., Chicago, Ill.  
 Sieverkropp Engine Co., The, Racine, Wis.  
 Simplicity—Turner Mfg. Co., Port Washington, Wis.  
 ◆ **Stinker-Davis Co., The**, Indianapolis, Ind.  
 Smith—T. L. Smith Co., Milwaukee, Wis.  
 Southern—Southern Engine & Boiler Works, Jackson, Tenn.  
 Spang & Company, Butler, Pa.  
 Standard Gas Engine Co., Oakland, Cal.  
 Standard Iron Works, Sherman, N. Y.  
 S S S—Standard Scale & Supply Co., Pittsburgh, Pa.  
 Standard—Gas Engine Works, Erie, Pa.  
 Standard Pump & Engine Co., Akron, O.  
 Star—Star Mfg. Co., New Lexington, O.  
 Stewart—Chicago Flexible Shaft Co., Chicago, Ill.  
 Stover—Stover Mfg. & Engine Co., Freeport, Ill.  
 Straff Mfg. Co., The H. N., Kansas City, Mo.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Sumner Engine Co., Fairmont, Minn.  
 Superior Gas Engine Co., Springfield, O.  
 Syracuse Industrial Gas Co., Syracuse, N. Y.  
 Tips Foundry & Machine Co., Austin, Tex.  
 T. & M. Termaat-Monahan Co., Oshkosh, Wis.  
 Transit—National Transit Pump & Machine Co., Oil City, Pa.  
 Turner-Fricke—Turner-Fricke Mfg. Co., Pittsburg, Pa.  
 Twin City—Twin City Co., Minneapolis, Minn.  
 Union—Union Gas Engine Co., Oakland, Cal.  
 United—United Engine Co., Lansing, Mich.  
 United—U. S. & Cuban Allied Works, Engr. Corp., Bradford, Pa.  
 Universal Motor Co., Oshkosh, Wis.  
 Van Duzen-Roy Co., Columbus, O.  
 Venn-Severin Machine Co., Chicago, Ill.  
 Victory—Victory Manufacturing Co., San Francisco, Cal.  
 Vim—Vim Motor Co., Sandusky, O.  
 [Warren—Struthers-Wells Co., Warren, Pa.  
 Waterloo Boy—Waterloo Gas Engine Co., Waterloo, Ia.  
 Western Machinery Co., Los Angeles, Cal.  
 Westinghouse—Westinghouse Machine Co., The, East Pittsburg, Pa.  
 Westman—Enterprise Machine Co., Minneapolis, Minn.  
 Whitcomb, Geo. D. Co., Rochelle, Ill.  
 Williamson-Harris Mfg. Co., Cordele, Ga.  
 Winton—The Winton Co., Cleveland, Ohio.  
 Wisconsin—The Lausen-Lawton Co., DePere, Wis.  
 Wisconsin—Wisconsin Machinery & Mfg. Co., Milwaukee, Wis.  
 Witte Engine Works, Kansas City, Mo.  
 Woodpecker—The Middletown Machine Co., Middletown, O.  
 Worthington Pump & Machinery Corp., New York.  
 Wright—The Wright Machine Co., Owensboro, Ky.  
 Wyandott Chief—Badger Gas & Gasoline Engine Co., Kansas City, Kan.  
 Young & Sons, E. R., Titusville, Pa.
- Dow Pump & Diesel Engine Co., San Francisco, Calif.  
 Dunn Motor Works, Ogdensburg, N. Y.  
 Dutcher Machine Co., Fulton, N. Y.  
 Elbridge Engine Co., Rochester, N. Y.  
 Emerson Engine Co., The, Alexandria, Va.  
 Erd—Erd Motor Co., Saginaw, Mich.  
 Erie Motor Co., Saginaw, Mich.  
 Evansville—Evansville Gas Engine Works, Evansville, Ind.  
 Evinrude Motor Co., Milwaukee, Wis.  
 Fay & Brown Engine Co., Geneva, N. Y.  
 Frisbie Motor—Frisbie Motor Co., Middletown, Conn.  
 Frisco Standard—Standard Gas Engine Co., Oakland, Cal.  
 G. G.—Gulowsen Sales Corp., Seattle, Wash.  
 Gaffga & Sons, J. S., Greenport, N. Y.  
 Gray Motor Co., Detroit, Mich.  
 Greenport—J. S. Gaffga & Sons, Greenport, L. I., N. Y.  
 Gries Engine Co., Detroit, Mich.  
 Grimm Mfg. Co., Buffalo, N. Y.  
 Hall Gas Engine Co., Bridesburg, Philadelphia, Pa.  
 Harrisburg Foundry & Machine Wks., Harrisburg, Pa.  
 Hercules Motor Mfg. Co., Canton, Ohio.  
 Herschell-Spillman Co., North Tonawanda, N. Y.  
 Hettinger—Hettinger Engine Co., Bridgeton, N. J.  
 Hicks Iron Works, San Francisco, Calif.  
 Hooven, Owens, Rentschler Co., Hamilton, O.  
 Imperial—Valentine Bros. Mfg. Co., Minneapolis, Minn.  
 Ingersoll Rand Co., New York.  
 Jacobson—Jacobson Gas Engine Co., Albany, N. Y.  
 Jacobson Semi-Diesel—Jacobson Gas Engine Co., Saratoga Springs, N. Y.  
 Jencick Motor Corporation, Port Chester, N. Y.  
 Jones, S. M., Co., The, Toledo, Ohio.  
 Kahlenberg Bros. Co., Two Rivers, Wis.  
 Kent Machine Works, Brooklyn, N. Y.  
 Kermath Mfg. Co., Detroit, Mich.  
 Kewanee—Kewanee Private Utilities Co., Kewanee, Ill.  
 L. & D. Motor Works, Hartford, Conn.  
 Lackawanna Mfg. Co., Ballston Spa, N. Y.  
 Lacy—The Cleveland Ice Machine & Mfg. Co., Lorain, Ohio.  
 Lamb Boat & Engine Co., Clinton, Ia.  
 Lawrence Machine Co., The, Lawrence, Mass.  
 Lazler—Lazler Gas Engine Co., Buffalo, N. Y.  
 Leary Gasoline Engine Co., Rochester, N. Y.  
 Lisk, Geo. A., Detroit, Mich.  
 Loane Engineering Co., Baltimore, Md.  
 Lockwood Ash Motor Co., Jackson, Mich.  
 Manual—Manumotors Co., Manitowoc, Wis.  
 Marion Machine Foundry & Supply Co., Marion, Ind.  
 Matthews—Matthews Engineering Co., Sandusky, Ohio.  
 Mechanics Foundry & Machine Co., Fall River, Mass.  
 Mercury Motor Co., New York, N. Y.  
 Mianus Motor Works, Stamford, Conn.  
 Mietz, August, Corp., New York.  
 Miller—Miller Engine Co., Chicago, Ill.  
 Missouri—Missouri Engine Co., St. Louis, Mo.  
 Monarch—Grand Rapids Gasoline Engine Co., Grand Rapids, Mich.  
 Moore-Motors—Palmer-Moore Co., Syracuse, N. Y.  
 Morton Motor Co., Detroit, Mich.  
 Motor Products & Engineering Co., Cleveland, O.  
 Motor & Mfg. Works, Dunkirk, N. Y.  
 Murray & Tregurtha Co., South Boston, Mass.  
 New York Launch & Engine Co., Morris Heights, N. Y.  
 Niagara—Buffalo Gasoline Engine Co., Buffalo, N. Y.  
 Niagara—Niagara Motors Corp., Dunkirk, N. J.  
 Nichols Power Co., Inc., Stamford, Conn.  
 Nisco Diesel—New London Ship & Engine Co., Groton, Conn.  
 Ontario—A. E. Olmstead, & Sons, Pulaski, N. Y.  
 Page Engineering Co., Baltimore, Md.  
 Palmer Bros., Engines, Inc., Cos Cob, Conn.  
 Parker—Dutcher Machine Co., Inc., Fulton, N. Y.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.  
 Pennsylvania Iron Works, Eddystone, Pa.  
 Perkins Bros., Havana, Ill.  
 Pittsburgh Model Engine Co., Pittsburgh, Pa.  
 Pormo—Aerotruster Engine Co., La Porte, Ind.  
 Portage Boat & Engine Co., Portage, Wis.  
 P. R.—Rathbun Jones Engineering Co., Toledo, O.  
 Price Pump & Engine Co., G. W., San Francisco, Cal.  
 Quayle—Commonwealth Motors Co., Chicago, Ill.  
 Quintard Iron Works Co., New York, N. Y.  
 Raquette Foundry & Supply Co., Massena, N. Y.  
 Red Seal—Continental Motors Corp., Detroit, Mich.  
 Regal Gasoline Engine Co., Coldwater, Mich.  
 Remington Oil Engine Co., The, Stamford, Conn.  
 Rex Motor Co., Boston, Mass.  
 Rome Gasoline Engine Co., Rome, N. Y.  
 Roberts—Roberts Motors, Sandusky, O.  
 Scripps—Scripps Motor Co., Detroit, Mich.  
 Speedway Boat Motor Co., Freeport, Ill.  
 Speedway—Gas Engine & Power Co., New York, N. Y.  
 S. R. Mfg. Co., The, Schenectady, N. Y.  
 Standard Gas Engine Co., San Francisco, Cal.  
 Standard Motor Construction Co., Jersey City, N. J.  
 Stanley Co., The, Salem, Mass.  
 Sterling—Sterling Engine Co., Buffalo, N. Y.  
 Superior—Superior Motor Works, Jackson, Mich.

#### ENGINES OR MOTORS, GASOLINE, MARINE, AUTO-MOBILE AND TRUCK.

- American Engine Co., Detroit, Mich.  
 Anderson—Anderson Engine Co., Chicago, Ill.  
 Automatic—Automatic Machine Co., Bridgeport, Conn.  
 Auto Engine Works, St. Paul, Minn.  
 Barber—King Brothers, Syracuse, N. Y.  
 Barker, C. L., Norwalk, Conn.  
 Bay City Iron Co., Bay City, Mich.  
 Blake, H. A., & Son, Cheboygan, Mich.  
 Brown-Collins Gas Engine Co., The, Hartford, Conn.  
 Brown Machine & Engine Co., Lansing, Mich.  
 Bud-E—Carlyle Johnson Machine Co., Manchester, Conn.  
 Cady, C. N., Co., Inc., The, Canastota, N. Y.  
 Caille Perfection Motor Co., Detroit, Mich.  
 Camden Anchor Rockland Machine Co., Camden, Me.  
 Campbell Motor Co., New York, N. Y.  
 Capitol—Auto Engine Works, St. Paul, Minn.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
 Clay—The Clay Engine Co., Cleveland, O.  
 Clifton Motor Works, The, Cincinnati, O.  
 Commonwealth Motors Co., Chicago, Ill.  
 Consolidated Kerosene Engine Works, Detroit, Mich.  
 Continental Motors Co., Detroit, Mich.  
 Craig, James, Engine & Machine Works, Jersey City, N. J.  
 DeLong Engine Co., Webster, N. Y.  
 Doman, H. C., Co., Oshkosh, Wis.

Toppan Boat Co., Boston, Mass.  
 Truscott Boat & Auto Supply Co., St. Joseph, Mich.  
 Tuttle Motor Co., Canastota, N. Y.  
 Toledo—Universal Machine Co., Toledo, O.  
 Union—Union Gas Engine Co., Oakland, Cal.  
 Universal Motor Co., Oskosh, Wis.  
 Van Blerck Motor Co., Detroit, Mich.  
 Venn-Severin—Venn-Severin Machine Co., Chicago, Ill.  
 Vim Motor Co., Sandusky, Ohio.  
 Vulcan Engine Works, Philadelphia, Pa.  
 Wade, Levi C., Lynn, Mass.  
 Watkins Motor Co., The, Cincinnati, O.  
 Western Machinery Co., Los Angeles, Cal.  
 Westman—Enterprise Machinery Co., Minneapolis, Minn.  
 Winton Gas Engine Co., Bridesburg, Philadelphia, Pa.  
 Wisconsin—Wisconsin Motor Mfg. Co., Milwaukee, Wis.  
 Wolverine Motor Works, Bridgeport, Conn.  
 Wonder Mfg. Co., The, Syracuse, N. Y.  
 Worthington Pump & Machinery Corp., New York.  
 Wright—Wright Machine Co., Owensboro, Ky.

#### ENGINES, HOISTING, GASOLINE.

(See also "Hoists.")

Backus Water Motor Co., Newark, N. J.  
 Blakeslee—American-Blakeslee Mfg. Co., Birmingham, Ala.  
 Charter Gas Engine Co., Sterling, Ill.  
 Clyde Grade—Clyde Iron Works, Duluth, Minn.  
 Domestic—Domestic Engine & Pump Co., Shippenburg, Pa.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Foos—The Foos Gas Engine Co., Springfield, O.  
 Lansing Motor & Pump Co., Lansing, Mich.  
 Mletz, August, Corp., New York.  
 Novo Engine Co., Lansing, Mich.  
 Union—Union Gas Engine Co., San Francisco, Cal.  
 Woodpecker—Middletown Machine Co., Middletown, O.

#### ENGINES, HOISTING, STEAM.

Allen Engineering Co., Philadelphia, Pa.  
 American—American Engineering Co., Philadelphia, Pa.  
 American—American Hoist & Derrick Co., St. Paul, Minn.  
 Blakeslee-White—Blakeslee Mfg. Co., Birmingham, Ala.  
 Buffalo Contractors' Plant Corp., Buffalo, N. Y.  
 Byers Machine Co., The, John F., Ravenna, O.  
 Carlin, John H. Machine Co., Pittsburgh, Pa.  
 Chase Machine Co., The, Cleveland, O.  
 Clyde—Clyde Iron Works, Duluth, Minn.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Crawford & McCrimmon Co., Brazil, Ind.  
 Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
 Duke Engine Co., Grand Haven, Mich.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Flory—S. Flory Mfg. Co., Bangor, Pa.  
 Flory—Lenher Engineering Co., New York, N. Y.  
 Guenther—J. Jacob Shannon Co., West Philadelphia, Pa.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Hunt Co., C. W., New York, N. Y.  
 Lake Shore Engine Works, Marquette, Mich.  
 Lambert—Lambert Hoisting Engine Co., Newark, N. J.  
 Lane & Bodley Co., The, Cincinnati, O.  
 Lansing Motor & Pump Co., Lansing, Mich.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 Litchfield Foundry & Machine Co., Litchfield, Ill.  
 Marine Iron Works, Chicago, Ill.  
 McKenown—Portsmouth Engine Co., Portsmouth, O.  
 Mead-Morrison—Mead & Morrison Mfg. Co., Boston, Mass.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Middletown Machine Co., Middletown, O.  
 Minneapolis Steel & Machinery Co., Minneapolis.  
 Morris Co., J. P., Philadelphia, Pa.  
 Mundy—J. S. Mundy, Hoisting Engine Co., Newark, N. J.  
 National—National Hoisting Engine Co., Harrison, N. J.  
 Nordberg—Nordberg Mfg. Co., Milwaukee, Wis.  
 Orr & Sembower, Inc., Reading, Pa.  
 Ottumwa Iron Works, Ottumwa, Ia.  
 Patch Mfg. Co., F. R., Rutland, Vt.  
 Price Pump & Engine Co., G. W., San Francisco.  
 Salisbury Foundry & Machine Co., Salisbury, Md.  
 Smith—The L. L. Smith Co., Milwaukee, Wis.  
 Southern—Southern Engine & Boiler Works, Jackson, Tenn.  
 Standard Gas Engine Co., Oakland, Cal.  
 Star Machinery Co., Seattle, Wash.  
 Stine, S. B., Osceola Mill, Pa.  
 Street Brothers Machine Works, Chattanooga, Tenn.  
 Stroudsburg Engine Works, The, Stroudsburg, Pa.  
 Superior Iron Works Co., Superior, Wis.  
 Union—Union Gas Engine Co., Oakland, Cal.  
 United Iron Works Co., Springfield, Mo.  
 Washington Iron Works, Seattle, Wash.  
 Welmer—Welmer Machine Works Co., Lebanon, Pa.  
 Weintz Bros., Evansville, Ind.  
 W. B.—San Francisco Engineering Co., San Francisco, Cal.

#### ENGINES, HOT AIR PUMPING.

Buffalo Engine Co., Buffalo, N. Y.  
 Caloric—Bremen Mfg. Co., The, Bremen, Ohio.  
 Erwin & Company, Chicago, Ill.  
 Reeco—Rider-Ericsson Engine Co., New York.  
 Wilmington—F. F. Slocumb & Co., Inc., Wilmington, Del.

#### ENGINES, HYDRAULIC.

(See "Rams, Hydraulic.")

#### ENGINES, MOORING.

Melco—Maine Electric Co., Portland, Me.

#### ENGINES, OIL WELL DRILLING.

Ajax Iron Works, Corry, Pa.  
 Bovard & Seyfang Mfg. Co., Bradford, Pa.  
 Brownell Co., The, Dayton, Ohio.  
 Clark Bros. Company, Olean, N. Y.  
 Oil City Boiler Works, Oil City, Pa.  
 Warren—Struthers-Wells Co., Warren, Pa.

#### ENGINES, POPPET VALVE.

Erie City Iron Works, Erie, Pa.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Nordberg Mfg. Co., Milwaukee, Wis.  
 Skinner Engine Co., Erie, Pa.  
 Vilter Mfg. Co., Milwaukee, Wis.

#### ENGINES, PUMPING.

(See also "Pumps, Power.")

#### ENGINES, ROPE HAULAGE.

Litchfield Foundry & Machine Co., Litchfield, Ill.

#### ENGINES, STEAM, AUTOMATIC.

A. B. C.—American Blower Co., Detroit, Mich.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Chandler & Taylor Co., Indianapolis, Ind.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Erco—Erie Mfg. & Supply Co., Erie, Pa.  
 Erie Engine Works, Erie, Pa.  
 Frost Mfg. Co., Galesburg, Ill.  
 Fritz Foundry & Machine Co., Geo. J., St. Louis, Mo.  
 Hill & Co., Wm. E., Kalamazoo, Mich.  
 Jewel—C. H. Dutton Co., Kalamazoo, Mich.  
 Nagle Engine & Boiler Works, Erie, Pa.  
 Reeves—A. D. Granger Co., Inc., New York, N. Y.  
 Skinner Engine Co., Erie, Pa.  
 Southern—Southern Engine & Boiler Works, Jackson, Tenn.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Troy—Troy Engine & Machine Co., Troy, Pa.

#### ENGINES, STEAM, CORLISS.

(See also Engines, Steam.)

Allen Machine Co., Erie, Pa.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 Ball Ice Machine Co., St. Louis, Mo.  
 Bates—Bates Machine & Tractor Co., Joliet, Ill.  
 Birmingham Machine & Foundry Co., Birmingham, Ala.  
 Chuse—Chuse Engine & Mfg. Co., Mattoon, Ill.  
 Erie Pump & Engine Co., Medina, N. Y.  
 Epping-Carpenter Pump Co., Pittsburgh, Pa.  
 Filer & Stowell Co., The, Milwaukee, Wis. (Corliss rocking valve, unafrow.)  
 Fleming—Harrisburg Foundry & Machine Works, Harrisburg, Pa.  
 Frost Mfg. Co., Galesburg, Ill.  
 Fulton Iron Works Co., St. Louis, Mo.  
 Girder Frame, Heavy Duty—Lane & Bodley Co., Cincinnati, O.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Harris—Franklin Machine Co., Providence, R. I.  
 Harrisburg—Harrisburg Foundry & Machine Works, Harrisburg, Pa.  
 Hewes & Phillips Iron Works, Newark, N. J.  
 Hooven, Owens, Rentschler Co., The, Hamilton, O.  
 Huettnerman & Cramer Co., Detroit, Mich.  
 Ideal—A. L. Ide & Sons, Springfield, Ill.  
 Mesta—Mesta Machine Co., Pittsburgh, Pa.  
 Murray—Murray Iron Works, Burlington, Ia.  
 Norberg—Nordberg Mfg. Co., Milwaukee, Wis.  
 Rice Sargent—Providence Engineering Corp., Providence, R. I.  
 Southern—Southern Engine & Boiler Works, Jackson, Tenn.  
 Southwark—Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Sun Shipbuilding Co., Wetherill Plant, Chester, Pa.  
 Tri-State—Tri-State Engineering Co., Zanesville, Ohio.  
 Twin City—Minneapolis Steel & Mach'y Co., Minneapolis, Minn.  
 Vilter Mfg. Co., The, Milwaukee, Wis.  
 Watts-Campbell Co., The, Newark, N. J.  
 Welmer—Welmer Machine Works Co., Lebanon, Pa.  
 Weintz Bros., Evansville, Ind.  
 Wisconsin Engine Co., Corliss, Wis.



**ENGINES, STEAM, MARINE.**

Badenhausen Co., Philadelphia, Pa.  
 Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
 Beverly—John S. Baker, Beverly, Mass.  
 Buckeye Engine Co., Salem, Ohio.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Codd Co., E. J., Baltimore, Md.  
 Cruickshank Engine Co., Providence, R. I.  
 Erie Pump & Engine Co., Erie, Pa.  
 Evansville—Evansville Gas Engine Works, Evansville, Ind.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Great Lakes Engineering Works, River Rouge, Mich.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Honest Clay—Clay Engine Mfg. Co., Cleveland, O.  
 International Clay Machinery Co., Dayton, O.  
 Lloyd, A., Erie, Pa.  
 Marine Iron Works, Chicago, Ill.  
 Monarch—Grand Rapids Gas Engine & Yacht Co., Grand Rapids, Mich.  
 Oriole—Page Engineering Co., Baltimore, Md.  
 Portland Co., The, Portland, Me.  
 Puget Sound Machinery Depot, Seattle, Wash.  
 Seabury—Gas Engine & Power Co., New York, N. Y.  
 Seattle Machine Works, Seattle, Wash.  
 Sun Shipbuilding Co., Wetherill Plant, Chester, Pa.  
 Toledo—The Standard Machy Co., Bowling Green, O.  
 Ward, Chas., Engineering Works, Charleston, W. Va.

**ENGINES, STEAM, PORTABLE.**

(See also "Engines, Traction.")

Arcadia Trailer Corporation, Newark, N. Y.  
 Dice—Dice Engine Co., Anderson, Ind.  
 Eagle Mfg. Co., Appleton, Wis.  
 Eclipse—Frick Co., Waynesboro, Pa.  
 Enterprise Co., The, Columbiana, O.  
 Farquhar Ajax—A. B. Farquhar Co., Ltd., York, Pa.  
 Heer Engine Co., The, Portsmouth, Ohio.  
 Leffel—The James Leffel & Co., Springfield, O.  
 Quayle—Commonwealth Motors Co., Chicago, Ill.  
 Russell Company, Massillon, Ohio.  
 20th Century Mfg. Co., Boynton, Pa.  
 Witte—Witte Engine Works, Kansas City, Mo.  
 Wood, S. W., Engine Co., Inc., Clyde, N. Y.

**ENGINES, STEAM, ROCKING VALVE.**

Allis-Chalmers Co., Milwaukee, Wis.  
 Bovaird & Seyfang Mfg. Co., Bradford, Pa.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Southern Engine & Boiler Works, Jackson, Tenn.

**ENGINES, STEAM, ROTARY.**

Augustine Automatic Rotary Engine Co., Buffalo, N. Y.  
 Herrick—The Herrick Engine Co., New York, N. Y.  
 Wing's—L. J. Wing Mfg. Co., New York, N. Y.

**ENGINES, STEAM, STATIONARY.**

ABC—American Blower Co., Detroit, Mich.  
 Acme—The Titusville Iron Works Co., Titusville, Pa.  
 Adams Machine Co., W. T., Corinth, Miss.  
 Advance-Rumley Universal—Advance-Rumely Co., Inc., LaPorte, Ind.  
 Ajax Iron Works, Corry, Pa.  
 Albany Iron Works, Albany, Ore.  
 Allen Machine Co., Erie, Pa.  
 All Free—The Ironton Engine Co., Ironton, O.  
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 American Ball—Badenhausen Co., Philadelphia, Pa.  
 American—The American Well Works, Aurora, Ill.  
 American Well & Prospecting Co., Corsicana, Tex.  
 Ames Automatic—Ames Iron Works, Oswego, N. Y.  
 Ball—Butler Engine & Foundry Co., Butler, Pa.  
 Ball Engine—Ball Engine Co., Erie, Pa.  
 Baltimore Engine Co., Baltimore, Md.  
 Barton—The Barton Boiler Co., Chicago, Ill.  
 Bass Foundry & Machine Co., The, Ft. Wayne, Ind.  
 Bates Corliss—Bates Machine & Tractor Co., Joliet, Ill.  
 Bayley Mfg. Co., Milwaukee, Wis.  
 Bayside Iron Works, Everett, Wash.  
 Bretting Mfg. Co., C. J., Ashland, Wis.  
 Brownell Co., The, Dayton, O.  
 Buckeye—Buckeye Engine Co., Salem, O.  
 Burnett Foundry & Machine Works, Ltd., Petoskey, Mich.  
 Carlin, John H. Machine Co., Pittsburgh, Pa.  
 Case—The New Britain Machine Co., New Britain, Conn.  
 Chandler & Taylor Co., Indianapolis, Ind.  
 Chief—Fitchburg Steam Engine Co., Fitchburg, Mass.  
 Chuse Engine & Mfg. Co., Mattoon, Ill.  
 Cincinnati—Lane & Bodley Co., Cincinnati, O.  
 Cincinnati Throttling—Lane & Bodley Co., Cincinnati, O.  
 Clark—Clark, J. M., Whitestone, L. I., N. Y.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Codd Co., E. J., Baltimore, Md.  
 Continental G. Co., Birmingham, Ala.  
 Cooper—The G. & C. Cooper Co., Mt. Vernon, O.  
 Corinth Machinery Co., Corinth, Miss.  
 Corliss, Geo. H.—American & British Mfg. Co., Providence, R. I.  
 Crowe—Paul L. Crowe, Jersey City, N. J.

Cruickshank Engine Co., Providence, R. I.  
 Dake Engine Co., Grand Haven, Mich.  
 Doak Gas Engine Co., San Francisco, Cal.  
 Dutton, C. H., Co., Kalamazoo, Mich.  
 Eagle—Progressive Mfg. Co., Torrington, Conn.  
 Engberg Electric & Mechanical Works, St. Joseph, Mich.  
 Enterprise Co., The, Columbiana, O.  
 Erie Pump & Engine Works, Inc., Erie, Pa.  
 Farquhar—A. B. Farquhar Co., Ltd., York, Pa.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Fitchburg—Fitchburg Steam Engine Co., Fitchburg, Mass.  
 Fleming—Harrisburg Foundry & Machine Works, Harrisburg, Pa.  
 Fulton Iron Works Co., St. Louis, Mo.  
 Giant—Chicago Pneumatic Tool Co., New York.  
 Godfrey-Keeler Co., New York, N. Y.  
 Grant Iron Works, Mahanoy City, Pa.  
 Green-Wheelock—American & British Mfg. Co., Bridgeport, Conn.  
 Hamilton—The Hooven, Owens, Rentschler Co., Hamilton, O.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Harrisburg Standard—Harrisburg Foundry & Machine Works, Harrisburg, Pa.  
 Henderson Iron Works & Supply Co., Ltd., W. K., Shreveport, La.  
 Hill & Co., Wm. E., Kalamazoo, Mich.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Hooven, Owens, Rentschler Co., The, Hamilton, O. (Corliss, Poppet Valve, Uniflow).  
 ♦ H. S. G.—Houston, Stanwood & Gamble Co., Cincinnati, O. (throttle, automatic, single valve, four valve).  
 Ideal—A. L. Ide & Sons, Springfield, Ill.  
 Kensington Engine Works, Philadelphia, Pa. (automobile).  
 Kidder & Craig, Rumney, N. H.  
 Leffel—The James Leffel & Co., Springfield, O.  
 Lentz—Erie City Iron Works, Erie, Pa.  
 Liddell-Tompkins—Liddell Co., Charlotte, N. C.  
 Lloyd, A., Erie, Pa.  
 Lucey Mfg. Corp., New York, N. Y.  
 Lufkin Foundry & Machine Co., Lufkin, Tex.  
 McIntosh-Seymour—McIntosh, Seymour & Co., Auburn, N. Y.  
 Mesta Machine Co., The, Pittsburg, Pa.  
 M. I. W.—Mecklenburg Iron Works, Charlotte, N. C.  
 Model Acme—Automatic Furnace Co., Dayton, O.  
 Monarch Corliss—The H. N. Strait Mfg. Co., Kansas City, Mo.  
 Morris Co., I. P., Philadelphia, Pa.  
 Murray—Murray Iron Works, Burlington, Ia.  
 New Electric—Bovaird & Seyfang Mfg. Co., Bradford, Pa.  
 New York Blower Co., Chicago, Ill.  
 New York Engine Co., Watertown, N. Y.  
 Nordberg Corliss—Nordberg Mfg. Co., Milwaukee, Wis.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 ♦ Orr & Sembower, Inc., Reading, Pa.  
 Pattin Bros. Co., The, Marietta, O.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Phoenix Mfg. Co., Eau Claire, Wis.  
 Porter-Allen—Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Price Pump & Engine Co., G. W., San Francisco, Cal.  
 Raleigh Iron Works Co., Raleigh, N. C.  
 Reading Scale & Machine Co., Reading, Pa.  
 Reeves-Cubberly Engine Co., Trenton, N. J.  
 Regal—Ames Iron Works, Oswego, N. Y.  
 Rice & Sargent—Providence Engineering Works, Providence, R. I.  
 Ridgway—Ridgway Dynamo & Engine Co., Ridgway, Pa.  
 Rollins Engine Co., Nashua, N. H.  
 Advance Rumely Co., LaPorte, Ind.  
 Safe—A. E. Olmstead & Sons, Pulaski, N. Y.  
 Sampson—The English Iron Works Co., Kansas City.  
 Schofield—J. S. Schofield's Sons Co., Macon, Ga.  
 Sebelin, Eugene W., Davenport, Ia.  
 Seymour—James M. Seymour, Newark, N. J.  
 S. M.—Snell & Sons, Hamburg, Pa.  
 Solano—Howard & Morse, New York, N. Y.  
 Standard Corliss—The Lane & Bodley Co., Cincinnati.  
 Star—Star Drilling Machine Co., Akron, O.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Sun Shipbuilding Co., Wetherill Plant, Chester, Pa.  
 Troy—Troy Engine & Machine Co., Troy, Pa.  
 Union Iron Works Co., The, Selma, Ala.  
 United Iron Works Co., Springfield, Mo.  
 Vilter Mfg. Co., The, Milwaukee, Wis.  
 Vim—Ames Iron Works, Oswego, N. Y.  
 Wachs Co., The E. H., Chicago, Ill. (Fully enclosed and self oiling).  
 Westinghouse Machine Co., The, East Pittsburgh, Pa.  
 Wetherill & Co., Inc., Robert, Chester, Pa.  
 Wheland—Wheland Co., Chattanooga, Tenn.  
 Wisconsin Engine Co., Corliss, Wis.  
 Wickes Bros., Saginaw, Mich.  
 Young & Sons, E. R., Titusville, Pa.

**ENGINES, STEAM, UNIFLOW.**

Ames Iron Works, Oswego, N. Y.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Harrisburg Foundry & Machine Works, Harrisburg, Pa.  
 Skinner Unaflo—Skinner Engine Co., Erie, Pa.  
 Swift's Acme—Donnegan & Swift, New York.  
 Troy—Troy Engine & Machine Co., Troy, N. Y.  
 Unaflo—Filer & Stowell Co., The, Milwaukee, Wis.  
 Unaflo—Kingford Foundry & Machine Works, Oswego, N. Y.  
 Universal Unaflo—Skinner Engine Co., Erie, Pa.

**ENGINES, STEAM, VERTICAL.**

◆ American Blower Co., Detroit, Mich.  
 Brunswick—Brunswick Refrigerating Co., New Brunswick, N. J.  
 Clarage Fan Co., Kalamazoo, Mich.  
 Clark Engine & Boiler Co., Kalamazoo, Mich.  
 C. H. Dutton Co., The, Kalamazoo, Mich.  
 Erie Pump & Engine Co., Erie, Pa.  
 Eureka—Oil City Boiler Works, Oil City, Pa.  
 Farquhar—A. B. Farquhar Co., Ltd., York, Pa.  
 Frits Foundry & Machine Co., Geo. J., St. Louis, Mo.  
 Godfrey-Keeler Co., New York, N. Y.  
 Hill & Co., Wm. E., Kalamazoo, Mich.  
 Lake City Engineering Co., Erie, Pa.  
 Morris Machine Works, Baldwinville, N. Y.  
 Murray—Murray Iron Works Co., Burlington, Iowa.  
 Shepherd—Shepherd Engineering Co., Williamsport, Pa.  
 Smith—T. L. Smith Co., The, Milwaukee, Wis.  
 Spherical—The Lawrence Machine Co., Lawrence, Mass.  
 Snell, J. H., & Sons, Hamburg, Pa.  
 Sturtevant, B. F. Co., Hyde Park, Mass.  
 Troy—Troy Engine & Machine Co., Troy, Pa.  
 Wachs Co., The E. H., Chicago, Ill.  
 Worthington Pump and Machinery Corp., New York, N. Y.

**ENGINES, STEERING, MARINE.**

American Engineering Co., Philadelphia, Pa.  
 American Holst & Derrick Co., St. Paul, Minn.  
 Dake Engine Co., Grand Haven, Mich.  
 Lenher Engineering Co., New York, N. Y.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 Melco—Maine Electric Co., Portland, Me.  
 Street Brothers Machine Wks., Chattanooga, Tenn.  
 Superior Iron Works Co., Superior, Wis.

**ENGINES, SWINGING.**

Clyde Grade—Clyde Iron Works, Duluth, Minn.  
 Dake Engine Co., Grand Haven, Mich.  
 Superior Iron Works Co., Superior, Wis.

**ENGINES, TURBINE.**

(See "Turbine Engines, Steam.")

**ENGRAVERS, ELECTRICAL, FOR ELECTRICALLY MARKING TOOLS.**

Gibb Instrument Co., Pittsburgh, Pa.

**ENTRAINMENT CATCHALLS.**

◆ Swartwout—Ohio Body & Blower Co., Cleveland, O.

**EQUIPMENT, TIRE MAKING AND REPAIR.**

Akron Rubber Mold & Machine Co., Akron, O.  
 Reliance-Western—Reliance Mfg. Co., Pasadena, Cal.  
 Reynolds Machine Co., Massillon, Ohio.

**EQUIPMENT, WATER FILTRATION PLANT.**

Ravard, M. L., & Co., Philadelphia, Pa.  
 Rider-Ericsson Engine Co., Walden, N. Y.

**SCOUTCHIONS OR FLANGES.**

American Pin Co., Waterbury, Conn.  
 Avco—Alliance Vitreous China Co., The, Alliance, O.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Hassell, John, Inc., Brooklyn, N. Y. (pins)  
 Hutter, Karl, Inc., New York.  
 Maddocks, Thos., Sons Co., Trenton, N. J.  
 New Jersey Tube Co., New York.  
 Sargent—Sargent & Co., New Haven, Conn.  
 Turner & Seymour Mfg. Co., The, Torrington, Conn.  
 J. B. Wise, Inc., Watertown, N. Y.

**ETHYL ACETATE.**

◆ Hercules Powder Co., Wilmington, Del.

**EVAPORATORS, MARINE.**

Bairds—M. T. Davidson, New York.  
 Hodges Water Still Co., Inc., Philadelphia, Pa.  
 Standard Multicoil—Standard Water System Co., Hampton, N. J.

**EVAPORATORS, SUGAR, PAPER, ETC.**

Blymer Iron Works Co., The, Cincinnati, O.  
 Buffalo—Buffalo Foundry & Machine Co., The, Buffalo, N. Y.  
 Camden Copper Works, Inc., Camden, N. J.  
 Devine, J. F., Co., Buffalo, N. Y.  
 Film Type—The Wheeler Condenser & Engineering Co., Carteret, N. J.  
 Houchin-Alken Co., Brooklyn, N. Y.  
 R. & D. Paracoll—Row & Davis Engineers, Inc., New York.  
 Reilly Multicoil—Griscom-Russell Co., New York, N. Y.  
 Ross Heater Mfg. Co., Buffalo, N. Y.  
 Sanitary Water Still Co., Jamaica, N. Y.

**EXCAVATORS, DERRICK.**

Union—Union Iron Works, Hoboken, N. J.

**EXCAVATORS, DRAG-LINE AND TIRE.**

C. L. Gade—Gade Bros., Mfg. Co., Iowa Falls, Iowa.  
 Dull, Raymond W., Co., Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.  
 Mansfield Engineering Co., Indianapolis, Ind.  
 Marion Steam Shovel Co., The, Marion, Ohio.  
 Orton & Steimbrenner Co., Chicago, Ill.  
 Osgood Co., The, Marion, O.  
 Parsons Co., The, Newton, Ia.  
 Pawling & Harnischfeger Co., Milwaukee, Wis.  
 Sauerman Bros., Chicago, Ill.

**EXCAVATORS, DRAINAGE AND IRRIGATION CANAL.**

Browning-Sommer-Adams Co., Cleveland, Ohio.  
 Keystone Driller Co., Beaver Falls, Pa.  
 Marion Steam Shovel Co., The, Marion, Ohio.  
 R & D Paracoll—Row & Davis, Engineers, Inc., New York.  
 Smith, T. L. Co., Milwaukee, Wis.

**EXCAVATORS, TRENCH.**

(See also "Machines, Trench.")

Gade Bros. Mfg. Co., Iowa Falls, Iowa.  
 Keystone—Keystone Driller Co., Beaver Falls, Pa.  
 Marion Steam Shovel Co., Marion, O.  
 Parsons Co., The, Newton, Ia.  
 Pawling & Harnischfeger Co., Milwaukee, Wis.

**EXCHANGERS, HEAT.**

Multiwhirl—Griscom-Russell Co., New York, N. Y.

**EXCITERS STEAM AND DUPLEX DRIVEN.**

Terry Steam Turbine Co., Hartford, Conn.

**EXHAUSTERS, ACID.**

Buffalo Forge Co., Buffalo, N. Y.  
 Duriron—(Acid proof), Duriron Co., Inc., Dayton, O.  
 Imperial—Pratt Engineering & Machine Co., Atlanta.

**EXHAUSTERS, AIR, FOR STEAM AND VACUUM HEATING SYSTEMS.**

(See "Systems, Heating, Vacuum" and "Pumps, Vacuum.")

McAlear Mfg. Co., The, Chicago, Ill.  
 O. E.—O. E. Specialty Mfg. Co., Milwaukee, Wis.  
 Penberthy—Penberthy Injector Co., Detroit, Mich.  
 Phelps—Ideal Mfg. & Supply Co., Oskaloosa, Iowa.

**EXHAUSTERS, GAS.**

A. B. C.—American Blower Co., Detroit, Mich.  
 Beach-Russ Co., Brooklyn, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Carling—Carling Turbine Blower Co., Worcester, Mass.  
 (Small sizes.)  
 Clarage Fan Co., Kalamazoo, Mich.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Connorsville—Connorsville Blower Co., Connorsville, Ind.  
 Davis & Farnum Mfg. Co., Waltham, Mass.  
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
 Mackenzie—Isabell-Porter Co., Newark, N. J.  
 Old Reliable—Wilbraham-Green Blower Co., Pottstown, Pa.  
 Rockwell, W. S., Co., New York, N. Y.  
 Sturtevant—B. F. Sturtevant Co., Hyde, Park, Mass.  
 Sterling Blower Co., Hartford, Conn.  
 Terry—Terry Steam Turbine Co., The, Hartford, Conn.  
 Wilbraham-Green Blower Co., Pottstown, Pa. (rotary).

**EXPANDERS, DRIVE FERRULE.**

Boosey—Greenwood Mfg. Co., Detroit, Mich.

**EXPANDERS, FLUE AND TUBE.**

◆ All-Steel, Frictionless, Lovejoy, Universal—Lovejoy Tool Works, Chicago, Ill.  
 Amco Sales Corp., Chicago, Ill.

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Arch—Gustave Wiedeke & Co., Dayton, O.  
Atlas—The Watson-Stillman Co., Aldene, N. J.  
Bullock, C. K., Co., Philadelphia, Pa.  
Collins—Ajax Mfg. Co., Pittsburg, Pa.  
Dayton—Gustave Wiedeke & Co., Dayton, O.  
Dudgeon, Richard, New York, N. Y.  
Faessler's—J. Faessler Mfg. Co., Moberly, Mo.  
Fergusons—A. L. Henderer's Sons, Wilmington, Del.  
Fox Chase Engineering Co., Inc., Philadelphia, Pa.  
Helwig—Helwig Mfg. Co., St. Paul, Minn.  
Henderer's Sons, A. L., Wilmington, Del.  
High Speed—A. L. Henderer's Sons, Wilmington, Del.  
Ideal—Gustave Wiedeke & Co., Dayton, O.  
Nicholson—W. H. Nicholson & Co., Wilkesbarre, Pa.  
Pittsburg Roller—Ajax Mfg. Co., Pittsburg, Pa.  
Prosser—Thomas Prosser & Son, New York, N. Y.  
Roller Standard—The Oswego Tool Co., Oswego, N. Y.  
Scully Steel & Iron Co., Chicago, Ill.  
♦ Universal—Lovejoy Tool Works, Chicago, Ill.  
Victor—Gustave Wiedeke & Co., Dayton, O.  
Waltham Appliance Co., Waltham, Mass.  
Western Pattern—The Oswego Tool Co., Oswego, N. Y.  
World's Champion—The Oswego Tool Co., Oswego, N. Y.

## EXPANDERS, ROSE.

Allen—Allen Fire Dept. Supply Co., Providence, R. I.  
Buckley—Larkin Mfg. Co., Dayton, O. (hydraulic).  
Elkhart—Elkhart Brass Mfg. Co., Elkhart, Ind. (power).  
Hayward & Co., S. F., New York, N. Y.  
♦ Sherman Mfg. Co., E. B., Battle Creek, Mich.  
Universal—Universal Nozzle Co., Indianapolis, Ind.

## EXPANDERS, LEAD PIPE.

Johnson, Wm., Newark, N. J.

## EXPANSION JOINTS, COPPER.

(See also "Joints, Expansion.")

Badger, E. B., & Sons Co., Boston, Mass.

## EXPLODERS.

♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.

## EXPLOSIVES.

♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.  
Trade Names—Carbonite, Du Pont, Meteor, Arctic, Monobel, Red Cross, Repauno—Grasselli—Grasselli Powder Co., Cleveland, Ohio.  
Hercules Powder Co., Wilmington, Del.  
Miners Friend—Atlas Powder Co., Wilmington, Del.

## EXPLOSIVES, OIL WELL.

Atlas Powder Co., Wilmington, Del.

## EXPLOSIVES, PERMISSIBLE.

Atlas Powder Co., Wilmington, Del.  
♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.  
Hercules Powder Co., Wilmington, Del.

## EXTENSION PIECES, CAST IRON.

Rice—Edward J. Rice Mfg. Co., Rochester, N. Y.

## EXTENSIONS, GREASE CUP.

Newton Mfg. Co., The, Plainville, Conn.

## EXTENSIONS, TAP.

Allen Mfg. Co., Hartford, Conn.

## EXTINGUISHERS, FIRE.

Acme—Missouri Lamp Mfg. Co., St. Louis.  
Acme—Rex-Harris Fire Appliance Co. of N. Y., New York, N. Y.  
Acorn—Acorn Brass Mfg. Co., Chicago.  
Alert, Babcock, Boyd Plunger, Keystone, La France No. 4, Paragon, Salvage—American La France Fire Engine Co., Elmira, N. Y.  
Ajax—Ajax Fire Engine Works, New York, N. Y.  
Allen, W. D., Mfg. Co., Chicago, Ill. (chemical).  
Always Ready—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
American—American Chemical Co., Lebanon, Pa.  
Amfrapco—American Fire Apparatus Co., New York, N. Y.

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Boyer—Obenchain-Boyer Co., Logansport, Ind.  
Buffalo—Buffalo Chemical Fire Extinguisher Co., Buffalo, N. Y.  
Chief Croker—Croker National Fire Prevention Engineering Co., New York, N. Y.  
Childs 2½-Gal. Approved—O. J. Childs Co., Inc., Utica, N. Y.  
Chloride—Ono Frezo Fire Extinguisher Mfg. Co., St. Louis, Mo.  
Clay Automatic—John H. Clay, Philadelphia, Pa.  
Cliff & Guilbert Co., New York, N. Y.  
Clipper—New Process Roofing & Supply Co., Dallas, Columbia—Columbia Defender Fire Extinguisher Co., Buffalo, N. Y.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Eclipse—Haverhill Fire Appliance Co., Haverhill, Mass.  
Edna Brass Mfg. Co., The, Cincinnati, Ohio (Locomotive).  
Econarusi—The Buffalo Chemical Fire Extinguisher Co., Buffalo.  
Ever Ready—Ever Ready Mfg. Co., Buffalo, N. Y.  
Ever-Ready—Lazarus Mfg. Co., The, Cleveland, O.  
Ever-Ready—Republic Chemical Fire Engine Co., Urbana, Ill.  
Fire Chief—John H. Clay, Philadelphia.  
Fire-Fly—Northwestern Chemical Co., The, Marietta, Ohio.  
Fire Dept.—Rex-Harris Fire Appliance Co. of N. Y., New York, N. Y.  
Fire Gun—Fire Gun Mfg. Co., Inc., New York, N. Y.  
Fire Protection Equipment Co., Chicago, Ill.  
Fire Warden—Knight & Thomas, Inc., Boston, Mass.  
Firex—Firex Manufacturing Co., Chicago, Ill.  
Foamite Firefoam Co., New York.  
Fyro Extinguisher Co., Syracuse, N. Y.  
Fyr-Fyter—The Fyr-Fyter Co., Dayton, O.  
Globe Automatic Sprinkler Co., Philadelphia, Pa.  
Guardene—Pyrene Co., New York.  
Harker Mfg. Co., Cincinnati, O. (Dry powder).  
Hayward—S. F. Hayward & Co., New York.  
Hero—Bogue Lead Co., The, Denver, Colo.  
Home—Home Chemical Co., Rochester, N. Y.  
Home Guard—Knight & Thomas, Inc., Boston, Mass.  
Howard—H. J. M. Howard Mfg. Co., Washington, D. C.  
Ideal—W. J. Foss Company, Springfield, Mass.  
Insurance—The Buffalo Chemical Fire Extinguisher Co., Buffalo.  
Insurance—James B. Hunt Mfg. Co., Trenton, N. J.  
Instantaneous Fire Extinguisher Co., The, New York.  
Jiffy—Jiffy Fire Hose Rack Co., New York, N. Y.  
Josico—John Simmons Co., New York, N. Y.  
Justrite Mfg. Co., Chicago, Ill.  
Kanawka—James Boyd & Bros., Philadelphia, Pa.  
Kanawha (air pressure)—Kanawha Chemical Fire Engine Mfg. Co., New York.  
La Prudencia—S. F. Hayward & Co., New York.  
Larkin—Larkin Mfg. Co., Dayton, O.  
McMorran & Co., Edw. E., Chicago.  
Magic—The Buffalo Chemical Fire Extinguisher Co., Buffalo, N. Y.  
Marine—Rex-Harris Fire Appliance Co. of N. Y., New York.  
Miller Chemical Engine Co., Chicago.  
Missouri—Missouri Lamp Mfg. Co., St. Louis.  
Monitor—Chas. Nuhning & Bro., Cincinnati.  
Motor—Rex-Harris Fire Appliance Co. of N. Y., New York.  
Nathan Mfg. Co., New York.  
National—M. Donohue & Son, New York, N. Y.  
National—Prier Brass Mfg. Co., Kansas City.  
Niagara—The Buffalo Chemical Fire Extinguishers Co., Buffalo, N. Y.

Northern—Northern Fire Extinguisher Co., Minneapolis, Minn.  
 Nu-Ex—Foamite Fireform Co., New York, N. Y.  
 Nu-Ex—Nu-Ex Fire Appliance Co., Columbus, O. (Liquid.)  
 O'Claire—The Moffet Mfg. Co., Eau Claire, Wis.  
 Peerless—Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
 Phoenix—Missouri Lamp Mfg. Co., St. Louis.  
 Phoenix—Phoenix Fire Extinguisher Co., Norwich, Conn.  
 Pittsburgh—Pittsburgh Lamp, Brass & Glass Co., Pittsburgh, Pa.  
 Porteous—The Edna Brass Mfg. Co., Cincinnati.  
 Presto, Railway & Marine—Knight & Thomas Co., Boston, Mass.  
 Pronto—The Allen Corporation, New York City.  
 Pyrene—Pyrene Mfg. Co., New York, N. Y.  
 Queen—Dusing & Hunt, Buffalo, N. Y.  
 Queen—Harker Mfg. Co., Cincinnati, O.  
 Railway and Marine—Knight & Thomas Co., Boston, Mass.  
 Regina—Rex Fire Appliance Co., New York.  
 Relc Chemical Standpipe System—Pyrene Mfg. Co., New York, N. Y.  
 Republic—Republic Chemical Fire Engine Co., Urbana, Ill.  
 Rescue—S. F. Hayward & Co., New York.  
 Rex—Rex-Harris Fire Appliance Co. of N. Y., New York.  
 Rex—Missouri Lamp Mfg. Co., St. Louis.  
 Rowe, A. C., & Son, Inc., New York, N. Y.  
 Royal—Missouri Lamp Mfg. Co., St. Louis.  
 Safety First—Harker Mfg. Co., Cincinnati, O. (Dry powder.)  
 Safety—The Safety Fire Extinguisher Co., New York.  
 Salisbury—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Success—Johns-Manville, Incorporated, New York, N. Y.  
 Tetra—Ono Frezo Fire Extinguisher Mfg. Co., St. Louis, Mo.  
 The General Mfg. Co., St. Louis, Mo.  
 Underwriters—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Underwriters—Knight & Thomas, Inc., Boston.  
 U. S.—United Mfg. Co., Toledo, Ohio.  
 U. S.—Missouri Lamp Mfg. Co., St. Louis.  
 Victor—Rex-Harris Fire Appliance Co. of N. Y., New York.  
 Wensley Metal Products Co., Denver, Colo.  
 Wisconsin Approved—Drake Mfg. Co., Milwaukee, Wis.

#### EXTINGUISHERS, SPARK

Thomson Improved—O. V. Hooker & Son, St. Johnsbury, Vt.

#### EXTRACTORS, BOILER TUBE

Little Giant—John F. Robertson Co., Pittsburg, Pa.

#### EXTRACTORS, BROKEN-TAP

Walton—The Walton Co., Hartford, Conn.

#### EXTRACTORS, CENTRIFUGAL

Tolhurst Machine Works, Troy, N. Y.

#### EXTRACTORS, COTTER PIE

Chapin-Stephens Co., Pine Meadow, Conn.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Marcy Tool Works, Inc., Putnam, Conn.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 National Tool Co., Brooklyn, N. Y.  
 Pioneer—The Southington Mfg. Co., Southington, Conn.  
 S. & I. Co., The, Springfield, Mass.  
 Vichek Tool Co., The, Cleveland, O.

#### EXTRACTORS, GREASE AND OIL

(See also "Separators, Steam.")

American Tool & Machine Co., Boston, Mass. (from metal chips).  
 Berryman—Benj. J. Kelley & Son, New York, N. Y.  
 Blackburn-Smith Corp., The, New York, N. Y.  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Curtis, Albert B., Worcester, Mass.  
 De Rycke—Provost Engineering Co., Brooklyn, N. Y.  
 Elliott—Elliott Co., Jeannette, Pa.  
 Fleur De Lis—Boston Steam Specialty Co., Boston, Mass.  
 Hine—James L. Robertson & Sons, New York, N. Y.  
 Hoppes—The Hoppes Mfg. Co., Springfield, O.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Lagonda—Lagonda Mfg. Co., Springfield, O.  
 Linton Machine Co., The, New York, N. Y.  
 Lowden—Jacobs & Co., Chas., Boston, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Moffat—The Dayton Steam Boiler Works, Dayton, O.  
 Monitor—The Jarvis Engine & Machine Works, Lansing, Mich.  
 National—National Separator & Machine Co., Boston, Mass.

Patterson-Kelley Co., The, New York, N. Y.  
 Peerless—Hussey, McCann & Co., New York, N. Y.  
 R. & D.—Row & Davis Engineers, Inc., New York.  
 Reilly—Griscom-Russell Co., New York, N. Y.  
 Springfield—National Separator & Machine Co., Boston, Mass.  
 Western Gas Construction Co., Fort Wayne, Ind.

#### EXTRACTORS, SCREW

♦ Ezy-Out—Cleveland Twist Drill Co., Cleveland, O.

#### EXTRACTORS, TAP

Buffalo Forge Co., Buffalo, N. Y.  
 Davis & Farnum Mfg. Co., Waltham, Mass.  
 Smith Type F.—Smith Gas Power Co., Dayton, O.  
 Western Gas Construction Co., Ft. Wayne, Ind.

#### FABRIC, COTTON, FOR AUTO AND MILL SUPPLY SPECIALTIES

Edelstone, Wm., Fabric Co., Boston, Mass.

#### FABRICS, FRICTION

(See also "Facings, Clutch," and "Linings, Auto Brake.")

Fabreeka Belting Co., Boston, Mass.  
 Standard Woven Fabric Co., Worcester, Mass.

#### FABRICS, WATERPROOFING

Genasco—The Barber Asphalt Paving Co., Philadelphia, Pa.

#### FACE PLATES, LATH

Oliver Machinery Co., Grand Rapids, Mich.  
 The Will-Burt Co., Orrville, Ohio.  
 Welch, T. F., & Co., Boston, Mass.

#### FACERS, CONCRETE, PNEUMATIC

Dallett—Thos. H. Dallett Co., Philadelphia, Pa.

#### FACERS, NUT

Victor—Emnert Mfg. Co., Waynesboro, Pa.  
 Victor—Victor Tool Co., Waynesboro, Pa.

#### FACING ARMS, PORTABLE

H. B. Underwood Corp., Philadelphia, Pa.

#### FACINGS, CLUTCH

(See also "Leathers, Friction.")

A. B. C.—American Brake Lining Co., Lansdale, Pa.  
 Armstrong Cork Co., Pittsburgh, Pa.  
 Asbestos—American Asbestos Co., Norristown, Pa.  
 Cork Insert Co., Boston, Mass. (cork insert).  
 ♦ Detroit Oak Belting Co., Detroit, Mich.  
 Dominion Disc, Band and Block Inserts—Dominion Asbestos and Rubber Corp., New York.  
 Duckwall Belting & Hose Co., Indianapolis, Ind.  
 ♦ Jewell Belting Co., Hartford, Conn.  
 Leathertex—Hide Leather & Belting Co., Indianapolis, Ind.  
 Mikesell Brothers Co., Chicago, Ill.  
 Multibestos—Standard Woven Fabrics Co., Framingham, Mass.  
 Perfection Tire & Rubber Co., Wabash, Ind.  
 Raybestos—Raybestos Co., The, Bridgeport, Conn.  
 Reinhold Belting & Supply Co., Inc., Brooklyn, N. Y.  
 Rusco—Russell Mfg. Co., Middletown, Conn.  
 S. M. C.—Staybestos Mfg. Co., Philadelphia, Pa.  
 Testbestos—American Asbestos Co., Norristown, Pa.  
 ♦ Thermoid—Thermoid, Rubber Co., Trenton, N. J.  
 Wetprufe—Hide Leather & Belting Co., Indianapolis, Ind.

#### FACINGS, FOUNDRY

Buckeye Products Co., The, Cincinnati, Ohio.  
 Buffalo Foundry Supply Co., Buffalo, N. Y.  
 Central Foundry Supply Co., Columbus, O.  
 Detroit Foundry Supply Co., Detroit, Mich.  
 Dixon Crucible Co., Joseph, Jersey City, N. J.  
 Doggett, Stanley, Jersey City, N. J.  
 Federal Foundry Supply Co., Cleveland, O.  
 Georgia Talc Co., Asheville, N. C.  
 Kelly, T. P., & Company, Inc., New York.  
 Keystone Foundry Supply Co., Buffalo, N. Y.  
 Koro—Hill & Griffith Co., Cincinnati, O.  
 McCormick Co., J. S., Pittsburgh, Pa.  
 Obermayer Co., S., Cincinnati, O.  
 Osborn Mfg. Co., Cleveland, O.  
 Faxon Co., J. W., Philadelphia, Pa.  
 Smith Facing & Supply Co., Cleveland, O.  
 Springfield Facing Co., Springfield, Mass.  
 Stevens, Frederic B., Detroit, Mich.  
 Tripoli Flour—American Tripoli Co., Seneca, Mo.  
 ♦ U. S. G. Co.'s—United States Graphite Co., Saginaw, Mich.

#### FANS, BLOW, EXHAUST, VENTILATING, ETC

(See also "Blowers.")

ABC—American Blower Co., Detroit, Mich.

Allington & Curtis Mfg. Co., The, Saginaw, Mich.  
 American Warming & Ventilating Co., Elmira, N. Y.  
 Autovent—Autovent Fan & Blower Co., Chicago, Ill.  
 Backus—Backus Water Motor Co., Newark, N. J.  
 Barney—Barney Ventilating Fan Works, Boston.  
 Bayley Junior—Bayley Mfg. Co., Milwaukee, Wis.  
 Berry Wheel—A. Hun Berry Fan Co., Boston, Mass.  
 Blackman—Howard & Morse, New York, N. Y.  
 Boston—Boston Blower Co., Hyde Park, Mass.  
 Brown & Patterson, Brooklyn, N. Y.  
 Buffalo—Buffalo Forge Co., Buffalo, N. Y.  
 Century—Century Electric Co., St. Louis, Mo.  
 ♦ Champion—Champion Blower & Forge Co., Lancaster, Pa.  
 Clarage, Kalamazoo, Multitude—Clarage Fan Co., Kalamazoo, Mich.  
 Clark Dust Collecting Co., Chicago, Ill.  
 Clark, Geo. P. Co., The, Windsor Locks, Conn.  
 Cone—Massachusetts Blower Co., Watertown, Mass.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Connellville Mfg. & Mine Supply Co., Connellville, Pa.  
 Coppus Engineering Co., Worcester, Mass.  
 Crawford & McCrimmon Co., Brazil, Ind. (Mine).  
 Crocker-Wheeler Co., Amper, N. J.  
 Cyclone Blow Pipe Co., Chicago, Ill.  
 Davidson Fan Co., Newton, Mass.  
 Davidson—The Emerson Electric Mfg. Co., St. Louis.  
 Diehl Mfg. Co., Elizabeth, N. J.  
 Disc—L. J. Wing Mfg. Co., New York, N. Y.  
 Dixie Mfg. Co., Baltimore, Md.  
 Duplex Cone—Howard & Morse, New York, N. Y.  
 Eck Dynamo & Motor Co., Belleville, N. J.  
 Efficco—W. F. Hirschman Co., Inc., Buffalo, N. Y.  
 Emerson Davidson Blade, Parker Blade—Emerson Electric Mfg. Co., St. Louis.  
 Empire—Toihurst Machine Works, Troy, N. Y.  
 Enpeesee—Natural Power Co., St. Louis, Mo.  
 Exeter Machine Works, Exeter, N. H.  
 Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.  
 Four Leaf Clover—Centrifugal Fan Co., Newark, N. J.  
 Garden City—Garden City Fan Co., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Grand Rapids Blow Pipe & Dust Arrestor Co., Grand Rapids, Mich.  
 Green-Matteawan—The Green Fuel Economizer Co., Beacon, N. Y.  
 Gyrofan—The National Screw & Tack Co., Cleveland, O.  
 Lehigh—Hersh Brothers Co., Allentown, Pa.  
 Hope Fan & Blower Co., Kansas City, Mo.  
 I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.  
 Ilg Electric Ventilating Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Invincible Blow Pipe Co., The, Chicago, Ill.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Kimble—Kimble Electric Co., Chicago.  
 Lundell—Sprague Electric Works, New York, N. Y.  
 Marathon Electric Mfg. Co., Wausau, Wis.  
 Marvel—Electric Blower Co., Boston, Mass. (electric).  
 Mathias Brothers & Co., Chicago, Ill.  
 Mechanical Appliance Co., The, Milwaukee.  
 Miller Machine Works, Springs, Pa.  
 Morse Rarified—Knickerbocker Co., The, Jackson, Mich.  
 National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.  
 National—Howard & Morse, New York, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Parker Blade—Emerson Elec. Mfg. Co., St. Louis.  
 Peerless—The Peerless Electric Co., Warren, O.  
 Perkins—B. F. Perkins & Son, Inc., Holyoke, Mass.  
 Polar Club—C. A. Gilbert Co., The, New Haven, Conn.  
 Poleair—A. Rosenberg Motor & Mfg. Co., Baltimore, Md.  
 Power Turbo Blower Co., New York.  
 Racine Universal—Racine Universal Motor Co., Chicago, Ill.  
 Reliance Electric & Engineering Co., Cleveland, O.  
 Richardson—New England Vent. & Heating Co., Providence, R. I.  
 Robbins & Myers Co., The, Springfield, O.  
 Robinson—Robinson Ventilating Co., Pittsburg, Pa.  
 Scruplex—L. J. Wing Mfg. Co., New York, N. Y.  
 (Disc and screw propeller.)  
 Serl-Vane—New York Blower Co., Chicago, Ill.  
 Service—Rochester Electric Motor Co., Rochester.  
 Seymour—James M. Seymour, Newark, N. J.  
 Sirocco—American Blower Co., Detroit, Mich.  
 Sly, W. W., Mfg. Co., Cleveland, O.  
 Specialty—Indiana Fan Co., Indianapolis Ind. (Belt.)  
 Star Fan & Motor Works, Newark, N. J.  
 Sterling—Sterling Blower Co., Hartford, Conn.  
 Stine Co., The, J. C., Tyrone, Pa.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Thermofans—Schutte & Koerting Co., Philadelphia, Pa.  
 Tuerk—Hunter Fan & Motor Co., Fulton, N. Y.  
 Typhoon—Typhoon Fan Co., New York, N. Y.  
 ♦ Ventura—American Blower Co., Detroit, Mich.  
 Watson—The Mechanical Appliance Co., Milwaukee.  
 Western Electric Co., Chicago, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
 Wolf Company, The, Chambersburg, Pa.  
 J. Zellweger & Sons, St. Louis, Mo. (air washing).



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 BELT FASTENERS**  
 Makes Joint Strongest Part of Belt  
**H. D. EDWARDS & COMPANY**  
 Detroit, Michigan

**FASTENERS, BOX, BALE AND CRATE.**

American Nut & Bolt Fastener Co., Pittsburgh, Pa.

**FASTENERS AND HOOKS, BELT.**

(See also "Lacing, Belt," and "Studs, Belt.")

♦ Alligator—Flexible Steel Lacing Co., Chicago, Ill.  
 Angell—Sawyer Belt Hook Co., Pawtucket, R. I.  
 Angell Self-Clinching—Angell Belt Hook Co., Providence, R. I.  
 Blake—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Black Diamond—Black Diamond Mfg. Co., Cincinnati.  
 Blake's—U. T. Hungerford Brass & Copper Co., New York, N. Y.

**"MAKE GOOD BELTS GIVE BETTER SERVICE"**



**CRESCENT BELT FASTENERS**  
 "For Continuous Production"

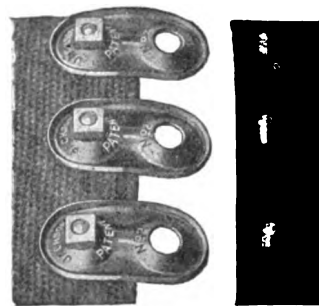
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Buffalo—Buffalo Specialty Co., Buffalo, N. Y.  
 Bull Dog—Columbia Novelty Mfg. Co., St. Louis, Mo.  
 Chase—The Strong Machinery & Supply Co., New York, N. Y.  
 ♦ Clipper Belt Lacer Co., Grand Rapids, Mich.  
 Crescent—Crescent Belt Fastener Co., Inc., New York.



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For mills, factories, etc., where quantities of hot water are required. Saves time, steam, water and accidents. It requires no repairs and will always be found ready for work. A positively practical invention for little money. May we send you a sample order?

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- Crown Woven Wire Brush Co., Salem, Mass.  
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 Eagle—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Eureka—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Fabric—Hudson Belt Fastener Co., New York, N. Y.  
 ♦ Flexible Steel Lacing Co., Chicago, Ill.  
 Giant—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Hicks Improved—Hindley Mfg. Co., Valley Falls, R. I.  
 Hicks—Wire Goods Co., The, Worcester, Mass.  
 "High Duty"—Flexible Steel Lacing Co., Chicago, Ill.  
 Hudson Patent Ideal—Fabric—Hudson Belt Fastener Co., New York, N. Y.  
 Jackson, Isaac, Belt Fastener Co., New York, N. Y.  
 Jacobsen—W. D. Allen Mfg. Co., Chicago, Ill.  
 Jencks, E., Mfg. Co., Worcester, Mass.  
 Jewell—Jewell Belt Hook Co., Hartford, Conn.  
 Jones, Harry H., Lancaster, N. H.  
 Kenchan—H. J. Stow, Chicago, Ill.  
 LX (oval pointed)—Manufacturers' Belt Hook Co., Chicago, Ill.  
 M. Covel—Manufacturers' Belt Hook Co., Chicago, Ill.  
 ♦ Moran—Graton & Knight Mfg. Co., Worcester, Mass.  
 Ne Fae—Capen Belting & Rubber Co., St. Louis, Mo.  
 Potter Style—Sawyer Belt Hooks Co., Pawtucket, R. I.  
 Pratt, Wm. E., Mfg. Co., Chicago, Ill.  
 Prize—The Geo. W. Southwick Co., New York, N. Y.  
 Quindriga Mfg. Co., The, Chicago, Ill. (round steel).  
 Raniville, F. Co., Grand Rapids, Mich.  
 Reinhold Belting & Supply Co., Inc., Brooklyn, N. Y.  
 Rival—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Sargent & Co., New Haven, Conn.  
 Sawilco—Angell Belt Hook Co., Providence, R. I.  
 Sawyer Plate, Sawyer Button, Sawyer Clinching, Angell, Potter Style—Sawyer Belt Hook Co., Pawtucket, R. I.  
 Simplex—Simplex Belt Hook Mfg. Co., Chicago, Ill.  
 Smith—H. D. Edwards & Co., Detroit, Mich.  
 Smithicks—F. P. Smith Co., Sharon Hill, Pa.  
 Stag—Columbia Novelty Mfg. Co., St. Louis, Mo.  
 Standard—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Standard Style—Sawyer Belt Hook Co., Pawtucket, R. I.  
 Stimpson Co., Edwin B., Brooklyn, N. Y.  
 Talcott's Wilson, Clinching, Combination, Acme Steel—W. O. & M. W. Talcott, Providence, R. I.  
 ♦ Turtle—Flexible Steel Lacing Co., Chicago, Ill.  
 Universal—Racine Iron & Wire Works, Racine, Wis.  
 Universal—The Strong Machinery & Supply Co., New York, N. Y.  
 Wire Goods Co., The, Worcester, Mass.

## FASTENERS, ROUND BELT.

Columbia Novelty Mfg. Co., St. Louis, Mo.

## FASTENERS, WOOD, CORRUGATED STEEL.

Perfect—The Dunker Supply Co., Canton, O.  
 Schanafelt Mfg. Co., Canton, O.

## FAUCETS, AUTOMATIC, TIME, FOR PUBLIC PLACES.

Haydenville Co., The, Haydenville, Mass.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 Powhatan Brass & Iron Works, Charlestown, W. Va.

## FAUCETS, GASOLINE, ANTI-DRIIP.

Clelock—The Cleveland Brass Mfg. Co., Cleveland, O.  
 ♦ Hays Mfg. Co., Erie, Pa.

## FAUCETS, HOT WATER MIXING.

Economy—Economy Faucet Co., Providence, R. I.  
 Imperator—Chicago Faucet Co., Chicago, Ill.  
 McRae & Roberts Co., Detroit, Mich.

## FAUCETS, PLUMBING. (See "Cocks and Bibbs.")

### FAUCET URN

Richardson, Edro Brass Co., Baltimore, Md.

### FAUCETS, WASHING MACHINE DRAIN.

Essex Brass Corp., Detroit, Mich.

### FEEDERS, BOILER COMPOUND.

- ♦ Active—Lunkenheimer Co., The, Cincinnati, O.  
 Automatic—Lake Erie Mfg. Co., Inc., Buffalo, N. Y.  
 ♦ Fisher Governor Co., The, Marshalltown, Ia.  
 Garrett, W. D., & Co., New York, N. Y.  
 Hills-McCanna Co., Chicago, Ill.  
 National—National Engineering Co., Saginaw, Mich.  
 Perfection—Lake Erie Mfg. Co., Inc., Buffalo, N. Y.  
 Red Star—Lake Erie Mfg. Co., Inc., Buffalo, N. Y.  
 Sims—The Sims Co., Erie, Pa.  
 Starwell System—Warner-Reiss Sales Co., St. Louis, Mo.  
 Terry Steam Turbine Co., Hartford, Conn.

### FEEDERS, BOILER OIL.

- ♦ Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.  
 Never Fail—McRae & Roberts Co., Detroit, Mich.  
 Shoo-Fly—Watts Regulator Co., Lawrence, Mass.  
 ♦ Sims—The Sims Co., Erie, Pa.  
 Wickersham American—John M. Watts Sons, Philadelphia, Pa.

### FEEDERS, BOILER WATER.

- Automatic Gravity Boiler Feeder Co., Philadelphia.  
 Bates—Edward P. Bates, Syracuse, N. Y.  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Capitol Triton—U. S. Radiator Corp., Detroit, Mich. (heating boiler).  
 Excelsior—N. A. Watson, Erie, Pa.  
 Farnsworth, Duplex—Farnsworth Mfg. Co., Boston, Mass.  
 F. W. Foster NevRlek—F. W. Foster & Sons Co., Boston.  
 Gardner—The Gardner Governor Co., Quincy, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Immersed Valve—Nason Mfg. Co., New York, N. Y.  
 Jamestown Boiler Works, Jamestown, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y. (low pressure).  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Koven & Bro., L. O., New York, N. Y.  
 Lawler's—Lawler Regulator Co., New York.  
 Lukenheimer Co., The, Cincinnati, O.  
 Mahoney Boiler & Radiator Co., Troy, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Matthews, W. N., & Brother, Inc., St. Louis, Mo.  
 Morehead—Morehead Mfg. Co., Detroit, Mich.  
 (Nason—Nason Mfg. Co., New York, N. Y.  
 New Haven—Foskett & Bishop Co., New Haven, Conn.  
 Nott Iron & Brass Works, H. L., White River Junction, Vt.  
 Penn—The Penn Engineering Co., Philadelphia, Pa.  
 Plouff—The Plouff Company, Boston, Mass.  
 ♦ Powell Co., The, Wm., Cincinnati, O.  
 Rutzler Co., E., New York, N. Y.  
 Taber—Taber Pump Co., Buffalo, N. Y.  
 Twinplex—Boylston Steam Specialty Co., Chicago, Ill.  
 Watts Regulator Co., Lawrence, Mass.

### FEEDERS, FURNACE.

- Allington & Curtis Mfg. Co., The, Saginaw, Mich.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Cyclone—Cyclone Blow Pipe Co., Chicago, Ill.  
 Dixie Mfg. Co., Baltimore, Md.  
 Grand Rapids Blow Pipe & Dust Arrester Co., Grand Rapids, Mich.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 ♦ Swartwout—Ohio Body & Blower Co., The, Cleveland, Ohio.  
 Sterling Blower & Pipe Co., Hartford, Conn.  
 Vulcan Furnace Co., Warren, O.

### FEEDERS, GRAPHITE LUBRICANT.

- Auxiliary Plain—The Lunkenheimer Co., Cincinnati, O.  
 Graphoil—Graphoil Lubricator Sales Co., New York.

### FEEDERS AND MIXERS FOR FEED MILLS, WATER WORKS AND CHEMICAL PLANTS.

Gauntt—W. J. Savage Co., Knoxville, Tenn.  
 Smidth, F. L., & Co., New York, N. Y.

### FEEDERS, POWDERED COAL.

Grindle—Grindle Fuel Equipment Co., Chicago, Ill.

### FEEDS, AUTOMATIC, FOR POWER PRESS.

Acme—F. J. Littell Machine Co., Chicago, Ill.  
 Walsh Press & Die Co., Chicago, Ill.

### FEEDS, FRICTION, SAW MILL.

Decatur Fdy., Furnace & Machine Co., Decatur, Ind.  
 Hill-Curtis Co., Kalamazoo, Mich.



**FEEDS, LATHES, GRABED.**

Wiggins, A. V. & Co., Syracuse, N. Y.

**FEEDS, STEAM, SAW MILL.**

Dake—Dake Engine Co., Grand Haven, Mich.  
Multnomah Iron Works, Portland, Ore.  
Soule Steam Feed Works, Meridian, Miss.

**FELT GOODS, MECHANICAL.**

Advance Felt & Cutting Co., Chicago, Ill.  
Algo—Auburn Leather Goods Co., Auburn, N. Y.  
Booth—The Booth Felt Co., Brooklyn, N. Y.  
Boston Felt Mfg. Co., Boston, Mass.  
Brawley, T. R., Brooklyn, N. Y.  
Lyons Felt Co., Brooklyn, N. Y.  
Mikesell Brothers Co., Chicago, Ill.  
Star Felt Cutting Co., The, Brooklyn, N. Y.  
Tingue, Brown & Co., New York, N. Y.

**FELT, HAIR.**

Baeder, Adamson & Co., Philadelphia, Pa.  
Bowden Bros., Cedar Grove, N. J.  
Carey—Phillip Mfg. Co., Lockland, O.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
Felters' Co., New York, N. Y.  
Johns-Manville, Incorporated, New York, N. Y.  
Keasbey, Robert A., Co., New York, N. Y.  
Keystone Hair Insulator Co., Pittsburgh, Pa.  
Mikesell Brothers Co., Chicago, Ill.  
Rhodes, James H., & Co., Chicago, Ill.  
Trainer, C. W., Boston, Mass.  
Watson, H. F., Co., Erie, Pa.

**FELT, OAKUM.**

Carey Mfg. Co., Philip, Lockland, O.  
Davy & Sons, W. O., Jersey City, N. J.  
Stratford Oakum Co., Geo., Jersey City, N. J.

**FELT ROOFING AND WATERPROOFING.**

Hydrex—Hydrex Asphalt Products Corp., New York, N. Y.  
Tile, Tite and Aquanon—Warren Chemical Div. Barrett Co., New York, N. Y.

**FELT, SHEET.**

Advance Felt & Cutting Co., Chicago, Ill.  
Eastern Felt Co., Winchester, Mass.  
Star Felt Cutting Co., Brooklyn, N. Y.  
Western Felt Co., Chicago, Ill.

**FELT, WOOL.**

Barrett Mfg. Co., New York, N. Y.  
Bird, F. W., & Son, East Walpole, Mass.  
Carey, Phillip, Mfg. Co., Lockland, O.  
Chatfield & Woods Co., Cincinnati, O.  
Comfort—H. F. Watson & Co., Erie, Pa.  
Coons, Fred M., Rockton, Ill.  
Detroit, Frigid, Superior—C. Stanley Morgan, Detroit, Mich.  
Ehret Magnesia Mfg. Co., Philadelphia, Pa.  
Felters Co., The, New York, N. Y.  
Garrett, C. & S. Co., Philadelphia, Pa.  
General Roofing Mfg. Co., East St. Louis, Mo.  
Hoosier Rock Wool Co., Alexander, Ind.  
Illinois Fire Proof Covering Co., Chicago, Ill.  
Insulating—H. F. Watson & Co., Erie, Pa.  
Johns-Manville, Incorporated, New York, N. Y.  
Kingstone, Wm., Sons, Little Falls, N. Y.  
Mac-Sim-Bar Paper Co., Otsego, Mich.  
New York Asbestos Mfg. Co., New York, N. Y.  
Superior—H. F. Watson & Co., Erie, Pa.  
Trinidad Asphalt Mfg. Co., St. Louis, Mo.  
Union Fibre Co., Winona, Minn.  
Union Roofing & Mfg. Co., St. Paul, Minn.

**FELTS.**

Genasco—The Barber Asphalt Paving Co., Philadelphia, Pa.

**FERRO-ALUMINUM.**

Aluminum Co. of America, Pittsburgh, Pa.  
Beer, Sondheimer & Co., New York, N. Y. (dealers).  
Electric Smelting & Aluminum Co., Lockport, N. Y.  
Hayman, Michael, & Co., Buffalo, N. Y.

**FERRO-CHROMIUM.**

Aluminum Co. of America, Pittsburgh, Pa.  
Dana & Co., New York, N. Y.  
Electro-Metallurgical Co., New York, N. Y.  
Goldschmidt Thermit Co., New York, N. Y.  
Hateclralloy—Halcomb Steel Co., Syracuse, N. Y.  
Metal & Thermit Corp., New York.  
Peerless Drawn Steel Co., Massillon, Ohio.  
Primos Chemical Co., Primos, Pa.  
Roessler & Hasslacher Chemical Co., New York, N. Y.  
United States Ferro Alloys Corp., New York, N. Y.  
Virginia Electrolytic Co., New York, N. Y.

**FERRO-MANGANESE.**

American Metal Co., New York, N. Y.  
American Steel Co., Pittsburgh, Pa.  
Ashland Iron & Mining Co., The, Ashland, Ky.  
Cambria Steel Co., Johnstown, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Colorado Fuel & Iron Co., Denver, Colo.  
Crescent Phosphorized Metal Co.  
Electro-Metallurgical Co., New York, N. Y.  
Goldschmidt Thermit Co., New York, N. Y.  
Hateclralloy—Halcomb Steel Co., Syracuse, N. Y.  
Metal & Thermit Corp., New York.  
Midvale Mining & Mfg. Co., St. Louis, Mo.  
Noble Electric Steel Co., San Francisco, Cal.  
Obermayer, S., Co., The, Cincinnati, Ohio.  
Primos Chemical Co., Primos, Pa.  
Rogers, Brown & Co., Cincinnati, O.  
Samuel, Frank, Philadelphia, Pa.  
United States Ferro Alloys Corp., New York, N. Y.  
Virginia Electrolytic Co., New York, N. Y.

**FERRO-NICKEL.**

Columbia Steel & Shafting Co., Pittsburgh, Pa.  
Electrical Alloy Co., Morristown, N. J.  
Hateclralloy—Halcomb Steel Co., Syracuse, N. Y.  
Primos Chemical Co., Primos, Pa.

**FERRO-PHOSPHORUS.**

Gray, J. J., Jr., Rockdale, Tenn.  
Hickman, Williams & Co., Louisville, Ky.  
Roessler & Hasslacher Chemical Co., New York, N. Y.  
Virginia Electrolytic Co., New York, N. Y.

**FERRO-SILICON.**

Ashland Iron & Mining Co., Ashland, Ky.  
Carbonite—General Abrasive Co., Niagara Falls, N. Y.  
Globe Iron Co., Jackson, O.  
Hateclralloy—Halcomb Steel Co., Syracuse, N. Y.  
Noble Electric Steel Co., San Francisco, Cal.  
Obermayer, S., Co., The, Cincinnati, Ohio.  
Southern Ferro Alloys Co., Chattanooga, Tenn. (electrolytic).  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.  
U. S. Ferro Alloys Corp., New York.  
Virginia Electrolytic Co., New York, N. Y.

**FERRO-TITANIUM.**

Electro-Metallurgical Co., New York, N. Y.  
Metal & Thermit Corp., New York.  
Titanium Alloy Mfg. Co., Niagara Falls, N. Y.

**FERRO-TUNGSTEN.**

Electro-Metallurgical Co., New York, N. Y.  
Metal & Thermit Corp., New York.  
Primos Chemical Co., Primos, Pa.  
Virginia Electrolytic Co., New York, N. Y.

**FERRO-URANIUM.**

Keokuk Electro-Metals Co., Keokuk, Ia.  
Midvale Mining & Mfg. Co., St. Louis, Mo.  
Shawinigan Electro Products Co., Baltimore, Md.  
Standard Alloys Co., Pittsburgh, Pa.  
Star Furnace Co., Jackson, O.

**FERRO-VANADIUM.**

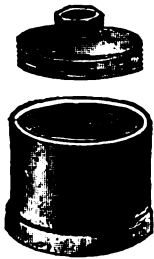
Andrews Steel Co., Newport, Ky.  
Carnegie Steel Co., Pittsburgh, Pa.  
Colonial Steel Co., Pittsburgh, Pa.  
Firth-Stirling Steel Co., McKeesport, Pa.  
Illinois Steel Co., Chicago, Ill.  
Metal & Thermit Corp., New York.  
National Drawn Steel Co., The, East Liverpool, O.  
Standard Alloys Co., Pittsburgh, Pa.  
United Steel Co., Canton, O.  
Vanadium-Alloys Steel Co., Latrobe, Pa.

**FERRULES, BASIN.**

Waterbury Mfg. Co., Waterbury, Conn.

**FERRULES, BRASS.**

American Brass & Copper Co., The, New York.  
American Brass Mfg. Co., The, Cleveland, O.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Sanitary Mfg. Co., Abingdon, Ill.  
Athol Pump Co., Athol, Mass.  
Ayling & Reichert Co., Toledo, O.  
Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
Brey & Krause Mfg. Co., Allentown, Pa.  
Clarksville Foundry & Machine Works, Clarksville, Tenn.  
Exeter Brass Works, Exeter, N. H.  
Flannery, P. J., Co., New Britain, Conn.  
Franklin Brass Foundry, Long Island City, N. Y.  
Gardner Brass Works, Boston, Mass.  
Gilbert—A. Gilbert & Sons Brass Foundry Co., St. Louis, Mo.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hajoca—Haines, Jones & Cadbury, Co., Philadelphia, Pa.  
Haydenville Co., The, Haydenville, Mass.  
Humphries Mfg. Co., The, Mansfield, O.



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# J. A. Zurn Manufacturing Co.

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Kruecke Bros., Mfg. Co., Milwaukee, Wis.  
Lathaw Steel & Metal Products Corp., New York.  
Loyal Brass Co., Cleveland, O.  
Lukomski Brothers Co., Detroit, Mich.  
McCambridge Co., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McShane Bell Foundry Co., Baltimore, Md.  
Mills Brass Co., W. A., Port Chester, N. Y.  
Monarch Brass Co., The, Cleveland, O.  
National Mfg. & Supply Co., Minneapolis, Minn.  
North Star Foundry Co., Minneapolis, Minn.  
Oberndorf Mfg. Co., Pittsburgh, Pa.  
Park & McKay Co., The, Detroit, Mich.  
Peck Bros. & Co., The, New Haven, Conn.  
Peninsular Brass Works, Detroit, Mich.  
Penn—East Penn Foundry Co., Macungie, Pa.  
Perkes Co., Charles, Philadelphia, Pa.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Red Met—Samuel Sloan & Co., Rochester, N. Y.  
Rockford Brass Works, Rockford, Ill.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Savill's Sons, Thomas, Philadelphia, Pa.  
Schrader Universal—Schrader's Sons, A. Inc.,  
Brooklyn, N. Y.  
Seattle Brass Co., Seattle, Wash.  
Standard Sanitary Mfg. Co., Pittsburg, Pa.  
Star—U. T. Hungerford Brass & Copper Co., New  
York, N. Y.  
Stebbins Mfg. Co., E. Springfield, Mass.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
Victory—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wells Chemical Bronze Works, Worcester, Mass.  
Wolff Mfg. Co., Chicago, Ill.  
Woodward-Wanger Co., Philadelphia, Pa.

### FERRULES, CLEANOUT.

American Foundry & Mfg. Co., St. Louis, Mo.  
Conrad's—John F. Conrad, Elizabeth, N. J.  
Eclipse—John C. Kupferle Foundry Co., St. Louis,  
Mo.  
Exeter Brass Works, Exeter, N. H.  
Garvie Pat.—Peck Bros. & Co., New Haven, Conn.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Haydenville Co., The, Haydenville, Mass.  
Hays Mfg. Co., Erie, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Park & McKay Co., Detroit, Mich.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Richmond Foundry & Mfg. Co., Richmond, Va.

### FERRULES, COMBINATION, LEAD AND IRON.

American Foundry & Mfg. Co., St. Louis, Mo.  
American Smelters Securities Co., San Francisco, Cal.  
Athol Pump Co., Athol, Mass.  
Bachman Bros., La Porte, Ind.  
Baker Lead Mfg. Worcester, Mass.  
Blake—Blake Specialty Co., Rock Island, Ill.  
Blatchford—National Lead Co., Chicago, Ill.  
Common Sense—Chas. Millar & Son Co., Utica, N. Y.  
Cooper—The Wordwell Plumbing Co., Taunton, Mass.  
Crampton-Farley Brass Co., Kansas City, Mo.  
Dubois—F. N. Dubois & Co., The, Inc., New York,  
N. Y.  
Gardner Metal Co., Chicago, Ill.  
Gardner Brass Works, Boston, Mass.  
Lippold Valve Co., The, Erie, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Mueller Mfg. Co., H., Decatur, Ill.  
National Lead Co., New York, N. Y.  
Raymond—Raymond Lead Co., Chicago, Ill.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Robertson Lead Co., James, Baltimore, Md.  
Rochester Lead Works, Rochester, N. Y.  
Standard Brass & Iron Works, Milwaukee, Wis.  
Turner Lead Co., East St. Louis, Ill.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
United Lead Co., New York, N. Y.

Wensley Metal Products Co., Denver, Colo.  
Windsor Mfg. Co., Milwaukee, Wis.  
Wolff Mfg. Co., L., Chicago, Ill.

### FERRULES, CONDENSER.

Richardson Brass Co., Edro, Baltimore, Md.

### FERRULES, COPPER, BOILER AND HEATER TUBE.

Cincinnati Gasket & Packing Co., Cincinnati, O.  
Connecticut Brass Corp., Waterbury, Conn.  
Hussey, C. G. & Co., Pittsburg, Pa.  
Rome Mfg. Co., Rome, N. Y.  
Scully Steel & Iron Co., Chicago, Ill.

### FERRULES, DRAINAGE.

Continental Fibre Co., Newark Centre, Del.  
Detroit—Greenwood Mfg. Co., Detroit, Mich.  
♦ Kelly & Jones Co., The, Greensburg, Pa.

### FERRULES, FUSE.

Risdon Mfg. Co., Naugatuck, Conn.  
Waterbury Mfg. Co., Waterbury, Conn.

### FERRULES, HARD FIBRE.

American Vulcanized Fibre Co., Wilmington, Del.  
Continental Fibre Co., Newark, Del.

### FERRULES, ROSE.

Salisbury & Co., W. H., Chicago, Ill.  
Schrader Universal—Schrader's Sons, A. Inc.,  
Brooklyn, N. Y.

### FERRULES, IRON, DRIVE.

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Boosey—Greenwood Mfg. Co., Detroit, Mich.  
Eclipse—Kupferle Foundry Co., John C., St. Louis,  
Mo.  
Feather Edge—Greenwood Mfg. Co., Detroit, Mich.  
Glenn Mfg. Co., St. Charles, Ill.  
♦ Hays Mfg. Co., Erie, Pa.  
Modern Iron Works, Quincy, Ill.  
Park & McKay Co., Detroit, Mich.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Ryans—Ryans & Fitzpatrick Co., Inc., Troy, N. Y.  
Sanitary Company of America, Linfield, Pa.  
Swett Iron Works, A. L., Medina, N. Y.  
Wolverine Foundry Co., Detroit, Mich.

### FERRULES, IRON, SOIL PIPE.

American Foundry & Mfg. Co., St. Louis, Mo.  
Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
Butler, Thos. F., Lorain, O.  
Haydenville Co., The, Haydenville, Mass.  
♦ Hays Mfg. Co., Erie, Pa.  
Hercules Iron & Supply Co., Boston, Mass.  
Illinois Malleable Iron Co., Chicago, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Modern Iron Works, Quincy, Ill.  
Sanitary Company of America, Linfield, Pa.  
Simplex—Mechanicsville Specialty Supply Mfg. Co.,  
Mechanicsville, N. Y.  
Stimpson Co., Edwin B., Brooklyn, N. Y.

### FERRULES, LEAD.

American Foundry & Mfg. Co., St. Louis, Mo.  
Baker Lead Mfg. Co., Worcester, Mass.  
Bogue-Wensley Lead Co., The, Denver, Colo.  
Eagle-Fisher Lead Co., Cincinnati, O.  
National Lead Co., New York, N. Y.  
United Lead Co., New York, N. Y.

### FERRULES, TRAP SCREW.

Advance—Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.

Amiron—American Iron Products Co., Inc., New York.

Bignall Co., The, Medina, N. Y.

Blake—Blake Specialty Co., Rock Island, Ill.

Casey-Hedges Co., The, Chattanooga, Tenn.

Cooper Foundry Co., Atchison, Kan.

Exeter Brass Works, Exeter, N. H.

Fleck Bros. Co., Philadelphia, Pa.

Franklin Brass Foundry, Long Island, N. Y.

Fries & Co., Buffalo, N. Y.

Glauber Brass Mfg. Co., Cleveland, O.

Gulderland Foundry Co., Gulderland, N. Y.

Hajoca—Haines, Jones & Cadbury, Co., Philadelphia, Pa.

Haydenville Co., The, Haydenville, Mass.

♦ Hays Mfg. Co., Erie, Pa.

♦ Kelly & Jones Co., The, Greensburg, Pa.

Kupferle Foundry Co., John C., St. Louis, Mo.

McCambridge Co., Philadelphia, Pa.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

Modern Iron Works, Quincy, Ill.

Mueller Mfg. Co., H., Decatur, Ill.

Newbury Mfg. Co., Monroe, N. Y.

New Orleans Regulation and N. Y. Regulation—A. L.

Swett Iron Works, Medina, N. Y.

Peck Bros. & Co., The, New Haven, Conn.

Pittsburg Valve & Fittings Co., Barborton, O.

Prier Brass Mfg. Co., Kansas City, Mo.

Rabe Pipe & Foundry Co., Inc., Chattanooga, Tenn.

Reading Foundry & Supply Co., Reading, Pa.

Richmond Foundry & Mfg. Co., Richmond, Va.

Sanitary Company of America, Linfield, Pa.

Treaty Co., The, Greenville, Ohio.

Wolverine Foundry Co., Detroit, Mich.

#### FERRULES, UNION.

Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.

#### FERRULES, VENT AND CLEANOUT.

♦ Hays Mfg. Co., Erie, Pa.

Jumbo Heater & Mfg. Co., The, Cleveland, O.

#### FIBRE, HARD.

(Sheets, Tubes, Rods, Etc.)

Davey Fibre Products Co., Jersey City, N. J.

Diamond State Fibre Co., Bridgeport, Pa.

Eastern Hard Fibre Co., Merrimac, Mass.

Empire Mfg. Co., Wilmington, Del.

Fiberoid—Wilmington Fibre Specialty Co., Wilmington, Del.

Fibre Conduit Co., Orangeburg, N. Y.

Gray Egyptian—Delaware Hard Fibre Co., Wilmington, Del.

Hewitt, C. B. & Bros., Inc., New York, N. Y.

Hewitt, C. B. & Bros., Inc., New York, N. Y.



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Keystone Fibre Co., Chester, Pa.

Livermore, Homer F., Inc., Boston, Mass.

Martin Machine Co., Turners Falls, Mass.

Mikesell Brothers Co., Chicago, Ill.

Spaulding, J., & Sons Co., North Rochester, N. H.

Standard Fibre Co., Somerville, Mass.

Vul-Cot—American Vulcanized Fibre Co., Wilmington, Del.

Wilmington Fibre Specialty Co., Wilmington, Del.

#### FILERS, SAW.

Bradley—Bradley-Gin Saw Filer Co., Dallas, Tex.

Cresay Rotary Filer Co., Bailing, Texas.

Machinery Co. of America, Big Rapids, Mich.

Stearns, E. C. & Co., Syracuse, N. Y.

#### FILERS, SIDE.

Stearns & Co., E. C., Syracuse, N. Y.

#### FILES, AUGER BIT, BABBITT, ETC.

Moore Bros., Jamestown, N. J.

#### FILES, DENTAL.

Tacony File & Hdw. Co., Inc., Philadelphia, Pa.

#### FILES, EQUALLING, KNITTING MACHINES.

Tacony File & Hdw. Co., Inc., Philadelphia, Pa.

#### FILES, MAGNETO OR COIL, AUGER BIT, BRASS AND BABBIT.

♦ Delta—Delta File Works, Philadelphia, Pa.

Igneto, Igneto Jr., Tungsto—Tacony File & Hdw. Co., Inc., Philadelphia, Pa.

#### FILES AND RASPS.

♦ American—Nicholson File Co., Providence, R. I.

American Swiss—E. P. Reichelm & Co., Inc., New York, N. Y.

♦ Arcade—Nicholson File Co., Providence, R. I.

Bernz, Otto, Newark, N. J.

Black Diamond—G. & H. Barnett Co., Philadelphia, Pa.

Black King—Rex File Co., The, Newcomerstown, O.

Chelsea—Chelsea File Works, Inc., The, Norwich, Conn. (hand cut).

Chicago File & Rasp Co., Grand Haven, Mich.

Cleveland—Wm. McClellan Co., The, Cleveland, O.

Colonial—Colonial File Co., Boston, Mass.

Continental File Corp., Anderson, Ind.

♦ Delta—Delta File Works, Philadelphia, Pa. (hand utility files, flat, half round, round and square)

♦ Delta Swiss Pattern—Delta File Works, Philadelphia, Pa.

♦ Disston, Henry & Sons, Inc., Philadelphia, Pa.

♦ Eagle—Nicholson File Co., Providence, R. I.

Fairbanks—The Fairbanks Co., New York, N. Y.

Gladium—The Gladium Co., Inc., New York, N. Y.

♦ Great Western—Nicholson File Co., Providence, R. I.

Grobet—Montgomery & Co., Inc., New York, N. Y.

Heller Bros.—Heller Bros. Co., Newark, N. J.

Hoe, R. & Co., New York, N. Y. (saw).

Industry File Works, Cleveland, Ohio.

♦ J. Barton Smith—Nicholson File Co., Providence, R. I.

J. B. G., Pittfield Cut—Grover File Co., Nashua, N. H.

♦ Kearney & Foot—Nicholson File Co., Providence, R. I.

Lutz—Lutz File Co., Cincinnati, Ohio.

Madden & Morrison File Co., Middleton, N. Y.

McCaffrey Files—McCaffrey File Co., Philadelphia, Pa.

McCarthy Drill & Tool Co., New York, N. Y.

Moore Bros., Jamestown, N. Y.

♦ Nicholson—Nicholson File Co., Providence, R. I.

Norman Warner Co., Inc., New York.

Ohlen-Bishop Co., The, Columbus, Ohio.

♦ Plumb—Plumb, Fayette R., Inc., Philadelphia, Pa.

Rex—Rex File Co., The, Newcomerstown, O.

Reynolds Bros., Columbus, O.

Rotary File & Machine Co., The, Brooklyn, N. Y.

Sharp—American File Sharpener Co., Brooklyn, N. Y.

Shannon, Wm., Middletown, N. Y.

♦ Simonds File Co., Fitchburg, Mass.

Stokes Bros. Mfg. Co., Freehold, N. J.

Superior, Spark—Nicholson File Co., Providence, R. I.

Tacony Igniter—Tacony File & Hardware Co., Inc., Tacony, Pa.

Tragle Mfg. Co., Inc., Reading, Pa.

Triple Diamond—Whitaker Mfg. Co., Chicago, Ill.

Trojan—Troy File Works, Troy, N. Y.

Valeau—T. P. Walls Tool & Supply Co., Inc., New York.

Vixen Tool Co., Newark, N. J.

♦ Whitman & Barnes Mfg. Co., Akron, O.

♦ X. F. Swiss Pattern—Nicholson File Co., Providence, R. I.

#### FILE AND RASP RE-CUTTING.

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Chicago File & Rasp Co., Grand Haven, Mich.

#### FILES AND RASPS, SAW.

Hoe—R. Hoe & Co., New York, N. Y.

#### FILES, PLATINUM POINT.

Igneto—Tacony File & Hardware Co., Philadelphia, Pa.

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(See also Pump Measuring.)

"Guarantee Visible"—Guarantee Liquid Measure Co., Rochester, Pa.

Tokheim—Tokheim Mfg. Co., Inc., The, Cedar Rapids, Ia.

#### FILLERS, BAG, FOR CEMENT, ETC.

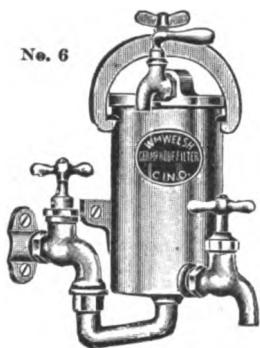
Valve Bag Company, The, Toledo, O.

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♦ Moran—Moran Flexible Steam Joint Co., Louisville, Ky.

Morrison—Morrison Bros., Dubuque, Ia.

No. 6



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Degraco—Detroit Graphite Co., Detroit, Mich.

Eureka—Otley Paint Mfg. Co., Chicago, Ill.

♦ Ferro—Johns-Manville, Inc., New York, N. Y.

Obermayer, S. Co., Cincinnati, O.

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### FILTERS, OILER.

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Deverall's—Deverall Perfection Mfg. Co., Brooklyn, N. Y.

♦ Eagle—Eagle Mfg. Co., Wellsburg, W. Va.

♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.

Hall's—Hall Mfg. Co., New York, N. Y.

Knapp Mfg. & Supply Co., New York, N. Y.

Sands Steel Specialties Co., Pittsburgh, Pa.

Wall Mfg. & Supply Co., The P., Pittsburgh, Pa.

Walters Mfg. Co., Pittsburgh, Pa.

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No Over Flow—Morrison Bros., Dubuque, Iowa.

### FILTERS, TRENCH.

Double Quick—Construction Machinery Co., Waterloo, Ia.

Parsons—The Parsons Co., Newton, Ia.

### FILLET, LEATHER AND WOOD.

Chain Products Co., The, Cleveland, Ohio.

Everett, A., & Son, Auburn, N. Y.

Knight, H. W., & Son, Seneca Falls, N. Y.

Obermayer, S. Co., The, Cincinnati, Ohio.

♦ Page Belting Co., Concord, N. H.

Perfect—The Dunker Supply Co., Canton, O.

Perfection—W. S. Nott Co., Minneapolis, Minn.

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Diamond Rubber Co., The, Akron, O.

Hudson Mechanical Rubber Co., New York, N. Y.

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### FILTERS, AIR SUCTION.

Clark Dust Collecting Co., Chicago, Ill.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

### FILTERS, AMMONIA, CHEMICAL, AND SMOKE.

Garnett—Herbert Garnett, Grand Rapids, Mich.

### FILTERS, BENZINE AND GASOLINE.

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### FILTERS, CISTERN.

Martin—Martin, Fort Wayne, Ind.

White's—John P. White, Fremont, O.

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American Automatic—Spaulding & Metcalf, Philadelphia, Pa.

♦ American—Burt Mfg. Co., Akron, O.

Anderson, V. D., Co., The, Cleveland, O.

Bartow—Hall Mfg. Co., Harrison, N. J.

Billow—National Supply Co., Chicago.

Bonar—James Bonar & Co., Pittsburgh, Pa.

Bowser—S. F. Bowser & Co., Ft. Wayne, Ind.

Centrifugal—Oil & Waste Saving Machine Co., Philadelphia, Pa.

Columbus Radiator—F. A. Nusbaum, Lockland, O.

♦ Cross—Burt Mfg. Co., Akron, O.

Duplex, Multiplex, Simplex—Famous Filter Co., St. Louis, Mo.

Ellis Pat—The John Wieben Co., New York, N. Y.

Elliott—Elliott Co., Pittsburgh, Pa.

♦ Fairbanks—Morse—Fairbanks, Morse & Co., Chicago.

Fitta—Frank F. Fitta Mfg. Co., Boston, Mass.

Fleur de Lis—Boston Steam Specialty Co., Boston, Mass.

Garrett, W. D., & Co., New York, N. Y.

Goade Water Filter & Purifier Mfg. Co., Allentown, Pa. (oil and water for ice plants).

Halls—Hall Mfg. Co., Harrison, N. J.

Industrial Instrument Co., The, Foxboro, Mass.

Is Improved—The Strong Machinery & Supply Co., New York.

Koven, L. O., & Bros., Jersey City, N. J.

Krotz—The Akron Belting Co., Akron, O.

Lalor Fuel Oil System Co., Baltimore, Md.

Maple City Mfg. Co., Monmouth, Ill.

National—National Separator & Machine Co., Boston, Mass.

National Marine Lamp Co., Forestville, Conn.

Nelson—John Acton, Brooklyn, N. Y.

Nugent—Wm. W. Nugent & Co., Chicago, Ill.

Oil & Waste Saving Machine Co., Philadelphia, Pa.

Palmer, Adam T., Dover, N. H.

The Perfect—Bousman Mfg. Co., Grand Rapids, Mich.

Perfect—Bousman Mfg. Co., Grand Rapids, Mich.

Permutit—Permutit Co., New York, N. Y.

Peterson—Richardson Phenix Co., Milwaukee, Wis.

Phenix—The Richardson-Phenix Co., Milwaukee, Wis.

Robertson Dry System—John F. Robertson Co., Pittsburgh, Pa.

Sexton Can Co., Boston, Mass.

Sims—The Sims Co., Erie, Pa.

Springfield—National Separator & Machine Co., Boston, Mass.

Superior—Handlan-Buck Mfg. Co., St. Louis, Mo.

Turner—Turner Oil Filter Co., Niles, Mich.

Waltens Mfg. Co., Pittsburgh, Pa.

♦ Warden—Burt Mfg. Co., Akron, O.

Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

Weld, Geo. A., & Co., Boston, Mass.

White Star—Pittsburg Gage & Supply Co., Pittsburg, Pa.

X-Ray—Maurer, Wm., & Co., South Bend, Ind.

### FILTERS AND PURIFIERS, FEED WATER.

Advance—F. E. Keyes & Son, New York, N. Y.

American—American Water Softener Co., Philadelphia, Pa.

♦ American—American Steam Gage & Valve Mfg. Co., Boston, Mass.

Baragwanath & Son, Wm., Chicago, Ill.

Barromite Co. of America, The, Chicago, Ill.

Berry—The Berry Engineering Co., Chester, Pa.

Blackburn-Smith Corp., The, New York, N. Y.

Buhring—Buhring Water Purifying Co., New York.

Cochrane—Harrison Safety Boiler Works, Philadelphia, Pa.

Colles—E. G. T. Colles & Co., Chicago, Ill.

Deoleizer—Cleite Corporation, New York, N. Y.

Eclipse Feed Water Heater Co., Oshkosh, Wis.

Economy—Mechanical Scale Prevention Co., New York.

Electric Water Sterilizer & Ozone Co., Scottsdale, Pa.

Elliott—Elliott Co., Jeannette, Pa.

♦ Eureka—Dodge Mfg. Co., Mishawaka, Ind.

Fleur de Lis—Boston Steam Specialty Co., Boston, Mass.

Garrett—Garrett, W. D., & Co., New York, N. Y.

Goade Water Filter & Mfg. Co., Allentown, Pa.

Graver Tank Works, Wm., East Chicago, Ind.

G. R. Multiscreen—Griscorn-Russell Co., New York.

H. S. B. W.—Harrison Safety Boiler Works, Philadelphia, Pa.

Hoppes—The Hoppes Mfg. Co., Springfield, O.

King Construction Co., No. Tonawanda, N. Y.

Koven & Bro., L. O., Jersey City, N. J.

Krause Absorbent Filter—A. E. Krause, Mountain Lakes, N. J.

Marion—The Marion Incline Filter & Heater Co., Marion, O.

Monitor—The Jarvis Engine & Machine Works, Lansing, Mich.

Oleite Corp., New York, N. Y.

Permutit—Permutit Co., New York, N. Y.

R. & D.—Row & Davis Engineers, Inc., New York.

Refinite—The Refinite Co., Omaha, Neb.

Steam Appliance Mfg. Co., Batavia, N. Y.

Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Water—Power Plant Specialty Co., Chicago, Ill.  
 Ward & Co., Geo. H., Brooklyn, N. Y.  
 Webster—Warren Webster & Co., Camden, N. J.  
 Whitlock Coil Pipe Co., The, Hartford, Conn.

**FILTERS, ROTARY.**

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

**FILTERS, SWIMMING POOL.**

Deoleizers—Oleite Corp., New York, N. Y.

**FILTERS, WATER.**

Acorn—Linke, Acorn & Advance Filter Mfg. Co., New York.  
 Advance—T. Link, New York, N. Y.  
 Allen Germ Proof—The Allen Filter Co., Toledo, O.  
 American Brass & Copper Co., The, New York.  
 American Sterilizer Co., Erie, Pa.  
 American Tripoli Co., Seneca, Mo.  
 American—American Water Softener Co., Philadelphia.  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Baileys Iron Works, The, John, Philadelphia, Pa.  
 Baltimore, Federal, Manhattan—Loomis-Manning Filter Distributing Co., Philadelphia, Pa.  
 Berkfeld Filter Co., New York, N. Y.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Blessing—New York Continental Jewell Filtration Co., Nutley, N. J.  
 Boston Water Purifiers—Boston Filter Co., Chelsea, Mass.  
 Bowden—Hygeia Filter Co., Detroit, Mich.  
 Buhring-Cummings—Buhring Water Purifying Co., New York, N. Y.  
 Carter—Field Force Pump Co., Elmira, N. Y.  
 Continental—New York Continental Jewell Filtration Co., Nutley, N. J.  
 Cummings—The Cummings Filter Co., Pittsburg, Pa.  
 Daugherty, W. E., Princeton, Ind.  
 Deoleizers—Oleite Corp., New York, N. Y.  
 Eclipse—Hygeia Filter Co., Detroit, Mich.  
 Electric Water Sterilizer & Ozone Co., Scottsdale, Pa.  
 Elliott Co., Jeannette, Pa.  
 Everson & Co., C. G., Chicago, Ill.  
 Excelsior—Buffalo Mfg. Co., Buffalo, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Fulper Pottery Co., Flemington, N. J.  
 Goade Water Filter & Purifier Mfg. Co., Allentown, Pa.  
 Graver, Wm. Tank Works, East Chicago, Ind.  
 Greer's—Greer Chemical Co., Chicago, Ill.  
 Griscom & Russell Co., New York, N. Y.  
 Hungerford—Hungerford & Terry, Inc., Philadelphia, Pa.  
 Hyatt—New York & Continental Jewell Filtration Co., Nutley, N. J.  
 Hygienic—Thos. W. Houchin Co., Inc., New York.  
 Imperial—Imperial Filter Mfg. Co., St. Louis, Mo.  
 International—International Filter Co., Chicago, Ill.  
 Jewell—New York Continental Jewell Filtration Co., Nutley, N. Y.  
 Jewell Polar Co., Chicago, Ill.  
 Jewell—Jewell Water Improvement Co., Chicago, Ill.  
 Jewett—Buffalo Mfg. Co., Buffalo, N. Y.  
 Jones Mfg. Co., Boston, Mass. Trade names—Glass Gem, Hub, Modern, Mystic, No Splash.  
 Kennicott—Kennicott Water Softener Co., Chicago Heights, Ill.  
 Kensington Engine Works, Philadelphia, Pa.  
 Keystone—Keystone Chemical Mfg. Co., Philadelphia.  
 Knobbe—The Knobbe Filter Co., Chicago, Ill.  
 Koven & Bros., L. O., Jersey City, N. J.  
 Levi—Vulcan Iron Works, Charlestown, W. Va.  
 Linke—Linke, Acorn & Advance Filter Mfg. Co., New York.  
 Loomis—Loomis-Manning Filter Distributing Co., Philadelphia, Pa.  
 McNally Duplex—Robert J McNally, Germantown, Pa.  
 Monarch Faucet, Non-Agitator, Bowden, Lynn—Hygeia Filter Co., Detroit, Mich.  
 Monitor—Hygeia Filter Co., Detroit, Mich.  
 Mountain Spring—Hess Co., Chas., New York, N. Y.  
 National—Klemm & Co., Chicago, Ill.  
 National—New York Continental Jewell Filtration Co., Nutley, N. J.  
 New York—New York Continental Jewell Filtration Co., Nutley, N. J.  
 Norwood Engineering Co., Florence, Mass.  
 Noxall—American Filter Co., Milwaukee, Wis.  
 Paddock—Atlantic Filter Co., Buffalo, N. Y.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Permutit—The Permutit Co., New York, N. Y.  
 Phillips—Garrison Brass & Machine Co., New York, N. Y.  
 Pittsburgh Filter & Eng. Co., Pittsburgh, Pa.  
 Polar Mfg. Co., New York, N. Y.  
 Rapid Safety Filter Co., New York, N. Y.  
 Red Cross—Red Cross Filter Co., Chicago, Ill.  
 Refinite—The Refinite Co., Omaha, Neb.  
 Roberts Filter Mfg. Co., Darby, Pa.  
 Seale, Wm. B., & Sons Co., Pittsburgh, Pa.

Seneca, Ozark, Tourist—E. L. Miller Mfg. Co., Kansas City, Mo.  
 Sheak—The Sheak Filter Co., Binghamton, N. Y.  
 Squier Filter Co., Dayton, Ohio.  
 Star—William Welsh, 2733 Arbor Ave., Cincinnati, O.  
 Stewart Stone—Hygeia Filter Co., Detroit, Mich.  
 Strong Machinery & Sup. Co., New York, N. Y.  
 Tripoli—J. A. Zura Mfg. Co., Erie, Pa.  
 Tripoli Stone—American Tripoli Co., Seneca, Mo.  
 Walsh Mfg. Co., Owen, New York, N. Y.  
 Warren—New York Continental Jewell Filtration Co., Nutley, N. J.  
 Watson—N. A. Watson, Erie, Pa.  
 Wilson—Norwood Engineering Co., Florence, Mass.

**FILTERS, WATER, AND COOLER COMBINED.**

Allen Filter Co., Toledo, Ohio.  
 Boston—Boston Filter Co., Chelsea, Mass.

**FILTERS, WATER, IRON REMOVING.**

Hungerford & Terry, Inc., Philadelphia, Pa.

**FINDERS, CENTRAL.**

Marvin & Casler Co., Canastota, N. Y.

**FIREBOXES, DETACHABLE, FOR TUBULAR BOILERS.**

Herbert—Herbert Boiler Co., Chicago, Ill.

**FIRECLAY.**

Atlas Co., Lincoln, N. J.  
 Claybestos—Federal Asbestos Co., Paterson, N. J.  
 Dickey Clay Mfg. Co., W. S., Kansas City, Mo.  
 Evens & Howard Fire Brick Co., St. Louis, Mo.  
 Hill & Griffith Co., Cincinnati, O.  
 McLeod & Henry Co., Troy, N. Y.  
 Macon Sewer Pipe Works, Macon, Ga.

**FIRE DEPARTMENT SUPPLIES.**

(See "Supplies and Apparatus, Fire Equipment.")

**FIRE ENGINES, CHEMICAL.**

(See "Engines, Fire.")

**FIRE ESCAPES.**

Alvey-Ferguson Co., Inc., Cincinnati, O. (spiral).  
 American Chain Ladder—American Fire Apparatus Co., New York, N. Y.  
 Baileys Iron Works, The, John, Philadelphia.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Burr Co., Champaign, Ill. (spiral).  
 Clarks—Rope Fire Escape Co., Philadelphia, Pa. (and metal cable).  
 Chattanooga Roofing & Foundry Co., Chattanooga, Tenn.  
 Columbus Wire & Iron Works, Columbus, O.  
 Duluth Corrugating & Roofing Co., Duluth, Minn.  
 Michigan Forge & Iron Works, Detroit, Mich.  
 Potts Manufacturing Co., Mechanicsburg, Pa.  
 Rex Fire Appliance Co., New York.  
 Sheer Bros. Fence & Iron Co., Cleveland, O.  
 Standard Conveyor Co., North St. Paul, Minn.  
 Tierney, J. P., Philadelphia, Pa. (Rope).  
 Wilson—Hayward & Co., S. F., New York (portable).  
 Wright Wire Co., Worcester, Mass.

**FIRE EXTINGUISHERS.**

(See "Extinguishers, Fire.")

**FIRE POTS.**

(See "Furnaces, Plumbers' and Tanners'")

**FIRE SAND.**

Carborundum Co., Niagara Falls, N. Y.  
 Garden City Sand Co., Chicago, Ill.  
 Gautier, J. H., & Co., Jersey City, N. J.  
 Maurer, Henry, & Son, New York, N. Y.  
 Presbrey Stove Lining Co., Taunton, Mass.  
 Raritan Ridge Clay Co., Metuchen, N. J.  
 Shepard, J. J., Cleveland, O.  
 Valentine, M. D., & Bro. Co., Woodbridge, N. J.

**FITTINGS, AIR BRAKE.**

Crane Co., Chicago, Ill.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Flagg & Co., Stanley G., Philadelphia, Pa.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Walworth Mfg. Co., Boston, Mass.  
 Westinghouse Air Brake Co., Pittsburg, Pa.

**FITTINGS, AMMONIA AND BRINE.**

Armstrong Machinery Co., Spokane, Wash.  
 Baker Ice Machine Co., Omaha, Neb.  
 Carbondale Machine Co., The, Carbondale, Pa.  
 Cincinnati Refrigerating Machinery Co., Cincinnati, Ohio.

- Crane—Crane Co., Chicago, Ill.  
 De La Vergne—De La Vergne Mach. Co., New York.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Edward—Edward Valve & Mfg. Co., Chicago, Ill.  
 High Pressure Fittings & Valve Co., Paterson, N. J.  
 Fulton Machine & Fitting Co., Canal Fulton, O.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Lukomski Brothers Co., Detroit, Mich.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Oil Well Supply Co., Pittsburg, Pa.  
 Rempe Co., Chicago, Ill.  
 R. D.—The Ruemmel Dawley Mfg. Co., St. Louis, Mo.  
 Triumph Electric Co., Cincinnati, O.  
 Triumph Ice Machine Co., Cincinnati, O.  
 Vilter Mfg. Co., The, Milwaukee, Wis.  
 Vogt, Henry Machine Co., Inc.  
 Walworth Mfg. Co., Boston, Mass.  
 Williams, J. H., & Co., Brooklyn, N. Y.  
 Wolf Co., The Fred N., Chicago, Ill.  
 York Mfg. Co., York, Pa.

#### FITTINGS, FURNISHINGS OR ACCESSORIES, BATH AND TOILET ROOM.

(See also "Cabinets, Toilet Paper," "Cabinets, Medicine," "Stools, Bath," etc.)

- American Enameled Products Co., Chicago, Ill.  
 American Ring Co., Waterbury, Conn.  
 Aetna Mfg. & Plating Co., Chicago, Ill.  
 All-White, All-Right—Bay Ridge Specialty Co., Inc., Trenton, N. J.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Brass & Copper Co., The, New York, N. Y.  
 Art Brass Co., The, New York, N. Y.  
 Avco—Alliance Vitreous China Co., The, Alliance, O.  
 Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Brooklyn—Silver & Co., Brooklyn, N. Y.  
 Central Specialty Mfg. Co., Chicago, Ill.  
 Columbus Brass Co., Columbus, O.  
 Crown, Universal, Rival—Peck Bros. & Co., The, New Haven, Conn.  
 Curtiss, J. H., Co., New York.  
 Du Bois, F. N., & Co., Inc., The, New York, N. Y.  
 Easy Set—J. H. Balmer Co., Passaic, N. Y.  
 Eastern—Eastern Specialty Mfg. Co., Scranton, Pa.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Enamo—Enamo Products Co., New York, N. Y.  
 Enamo, Tilein—Hughes-Evans Co., Inc., New York, N. Y.  
 Fairchild & Shelton, Bridgeport, Conn.  
 Fairfacts China, Biltin China—Fairfacts Co., Inc., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Femco—The Frost Mfg. Co., Kenosha, Wis.  
 Garden City Plating & Mfg. Co., Chicago, Ill.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Good Mfg. Co., Inc., New York, N. Y.  
 Greenwood Mfg. Co., Detroit, Mich.  
 Haydenville Co., The, Haydenville, Mass.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ivorine—Eastern Specialty Mfg. Co., Scranton, Pa.  
 Kohler Co., Kohler, Wis.  
 Maddock's, Thos., Sons Co., Trenton, N. J.  
 Manhattan Brass Co., New York, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 Metal Crafters, The, East Stroudsburg, Pa.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Newman Mfg. Co., The, Cincinnati, O.  
 Omala—Galaro Co., Newark, N. J. (white).  
 Palette—Searls Mfg. Co., Newark, N. J.  
 Parker Co., The Chas., Meriden, Conn.  
 Park & McKay Co., The, Detroit, Mich.  
 Ringco—American Ring Co., Waterbury, Conn.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn. (white enamel).  
 Sanoid—Conant Bros. Co., Somerville, Mass.  
 Sargent & Co., New Haven, Conn.  
 Shafco—The Chas. W. Schaffer Co., Philadelphia, Pa.  
 Silver's—Silver & Co., Brooklyn, N. Y.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Sternau & Co., S., Brooklyn, N. Y.  
 Superior Brass Novelty Co., New York, N. Y.  
 Sweeney Mfg. Co., W. H., Brooklyn, N. Y.  
 Tile-In (China) Hughes-Evans Co., Inc., The, New York, N. Y.  
 Wilwear—The Novelty Mfg. Co., Waterbury, Conn.  
 Wire Goods Co., The, Worcester, Mass. (wire).  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### FITTINGS, BOILER.

(See also "Cocks, Gages," etc.)

- Belknap Mfg. Co., Bridgeport, Conn.  
 Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
 Crane Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Flagg, Stanley G., & Co., Philadelphia, Pa.  
 Hawke—Hugo Mfg. Co., Duluth, Minn.  
 Haydenville Co., The, Haydenville, Mass.  
 Illinois Malleable Iron Co., Chicago, Ill.

- Jefferson Union Co., Lexington, Mass.  
 Lunkenheimer Co., Cincinnati, O.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 McEae & Roberts Co., The, Detroit, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Ryerson, Joseph T., & Son, Chicago, Ill.  
 Sherwood Mfg. Co., Buffalo, N. Y.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Walworth Mfg. Co., Boston, Mass.  
 Walsh & Weidner Boiler Co., The, Chattanooga, Tenn.

#### FITTINGS, BRASS, IRON PIPE SIZES.

- Acheson Mfg. Co., Braddock, Pa.  
 Cahill Mfg. Co., Worcester, Mass.  
 Cornelius-Morgan Co., Inc., San Francisco, Cal.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Michigan Lubricator Co., Detroit, Mich.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### FITTINGS, CAR HEATER.

- C.—Crane Co., Chicago, Ill.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Walworth Mfg. Co., Boston, Mass.

#### FITTINGS AND COUPLINGS, GASOLINE PIPE.

- Commonwealth Brass Corp., Detroit, Mich.  
 Lo-hi—Loane-task Engineering Co., Baltimore, Md.

#### FITTINGS, CLOSET, FLOOR.

- Brey & Krause Mfg. Co., Allentown, Pa.

#### FITTINGS AND TRIMMINGS, CLOSET AND URINAL STALL.

- Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Copper Co., The, New York, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Atkinson Co., The, Rochester, N. Y.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Buffalo Mfg. Co., Buffalo, N. Y.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Climax—The Columbus Brass Co., Columbus, O.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Dayton—McCormick Mfg. Co., Dayton, O.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Dent—The Ribble Thatcher Co., Bangor, Pa.  
 Douglas Co., The John, Cincinnati, O.  
 Dunstane Bros. Mfg. Co., Concord, N. H.  
 Eclipse—The Columbus Brass Co., Columbus, O.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Em Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Fil—The Columbus Brass Co., Columbus, O.  
 Fries & Co., Buffalo, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Maltby, Geo. W. & Sons Co., Buffalo, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 McCormick Mfg. Co., Dayton, O.  
 Madden's Patent—James B. Clow & Sons, Chicago, Ill.  
 Miami—The Columbus Brass Co., Columbus, O.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Mullaney's Sons, James, New York, N. Y.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Neptune—The Columbus Brass Co., Columbus, O.  
 New Jersey Tube Co., New York, N. Y.  
 Newman Mfg. Co., The, Cincinnati, O.  
 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes Co., Charles, Philadelphia, Pa.  
 Rex—Jenkins Mfg. Co., New York, N. Y.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Sargent & Co., New York, N. Y.  
 Speakman Co., Wilmington, Del.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Waterbury Mfg. Co., Waterbury, Conn.



Wise, J. B. Inc., Watertown, N. Y.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Wolff Mfg. Co., Chicago, Ill.

**FITTINGS AND TRIMMINGS, CLOSET TANK.**

(See also "Cocks, Ball," "Valves, Water Closet Flushing.")

Alliance Brass Foundry Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., The, Waterbury, Conn.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Blickman, I., New York, N. Y.  
 Challenge—Findeisen & Kropf Mfg. Co., Chicago.  
 Douglas Co., The John, Cincinnati, O.  
 Dwasco Mfg. Co., Canandaigua, N. Y.  
 Eljer Co., Cameron, W. Va.  
 Emery, Wm. S., New York, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Federal-Huber Co., Chicago, Ill.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Gaco—Pittsburg Gage & Supply Co., Pittsburg, Pa.  
 Glackon—Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Grand Haven Brass Foundry Co., Grand Haven, Mich.  
 Indiana Brass Co., The, Frankfort, Ind.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Michigan Sanitary Co., Muskegon, Mich.  
 Miller, Chas. A., Co., Sturgis, Mich.  
 M-V B.—Morency-Van Buren Mfg. Co., Sturgis, Mich.  
 New Jersey Tube Co., New York.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Rome Sanitary Co., Rome, N. Y.  
 Rumsey Mfg. Co., L. M., St. Louis, Mo.  
 Schureman—Findeisen & Kropf Mfg. Co., Chicago, Ill.  
 Scully—The W. J. Scully Ventilator & Mfg. Co., Detroit, Mich.  
 Trenjer Specialty Co., Trenton, N. J.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Woodward-Wanger Co., Philadelphia, Pa.

**FITTINGS, ELECTRIC LIGHT FIXTURE.**

Matchless Brass Mfg. Co., Brooklyn, N. Y.  
 Pratt Chuck Co., The, Frankfort, N. Y.  
 Unilets—Inland Electric Co., Chicago, Ill.

**FITTINGS, EXHAUST.**

Wheeler, C. H., Mfg. Co., Philadelphia, Pa.

**FITTINGS, GAS FIXTURE.**

Ampinco—American Pin Co., Waterbury, Conn.  
 Brandt-Dent Co., Watertown, N. Y.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Edwards Mfg. Co., W. S., Chicago, Ill.  
 Farles Mfg. Co., Decatur, Ill.  
 Flagg & Co., Stanley G., Philadelphia, Pa.  
 Frank Bros., New York, N. Y.  
 General Fire Extinguisher Co., Providence, R. I.  
 Grinnell Company, Providence, R. I.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 Mitchell Vance Co., The, New York, N. Y.  
 Peninsular Brass Works, Detroit, Mich.  
 Pittsburgh Gage & Supply Co., Pittsburg, Pa.  
 Standard Brass Works, Detroit, Mich.  
 Steele & Johnson Mfg. Co., Waterbury, Conn.  
 Utica Valve & Fixture Co., Utica, N. Y.  
 Wakefield Brass Co., The F. W., Vermillion, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williamson & Co., R., Chicago, Ill.

**FITTINGS, GAS TANK.**

Standard Brass & Iron Works, Milwaukee, Wis.

**FITTINGS, GREENHOUSE HEATING.**

Central Foundry Co., New York, N. Y.  
 Glenn Mfg. Co., St. Charles, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Johnson, J. D., Co., Philadelphia, Pa.  
 Kroeschell Bros. Co., Chicago, Ill.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**FITTINGS, HOSE, BRASS.**

(See also "Couplings, Hose.")

Acheson Mfg. Co., Braddock, Pa.  
 Allen Fire Dept. Supply Co., Providence, R. I.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 ♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Callahan, Cornelius Co., The, Boston, Mass.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Farnam Brass Works, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Landers, Frary & Clark, New Britain, Conn.

McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 Nob-Lok—C. A. Claflin Co., Boston, Mass.  
 ♦ Powell, Wm. Co., The, Cincinnati, O.  
 Powhatan Brass & Iron Works, Charlestown, W. Va.  
 Schrader Universal—Schrader's, A., Sons, Inc., Brooklyn, N. Y.  
 Seattle Brass Co., Seattle, Wash.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Standard Brass & Iron Works, Milwaukee, Wis.  
 Sure Hold—C. A. Claflin Co., Boston, Mass.

**FITTINGS, HOSE, SPRAY.**

Sherman, H. B., Mfg. Co., Battle Creek, Mich.

**FITTINGS, LAVATORY.**

(See "Cocks, Basin," "Traps, Basin," etc.)

**FITTINGS, OIL FIXTURE.**

Essex Brass Corp., Detroit, Mich.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 White Star—Pittsburgh Gage & Supply Co., Pittsburg, Pa.

**FITTINGS, PIPE, ACID RESISTING.**

Acheson Mfg. Co., Braddock, Pa.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 McCambridge Co., Philadelphia, Pa.  
 Raymond Lead Co., Chicago, Ill.

**FITTINGS, PIPE, BASE.**

Essex Foundry, Newark, N. J.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**FITTINGS, PIPE, BRASS.**

Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Copper Co., The, New York, N. Y.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Atkinson Co., The, Rochester, N. Y.  
 Belfield Co., H., Philadelphia, Pa.  
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 Boston Brass Co., Boston, Mass. (fine thread).  
 Briggs, Wm., Inc., Brooklyn, N. Y.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Burlington Brass Works, Burlington, Wis.  
 Cahill Mfg. Co., Worcester, Mass.  
 Central Brass Mfg. Co., The, Cleveland, O.  
 C. C. Crane—Crane Co., Chicago, Ill.  
 Crescent Mfg. Co., Scottdale, Pa.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Eichman, J. C., Mfg. Co., Baltimore, Md.  
 Exeter Brass Works, Exeter, N. H.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Garrett & Co., W. T., San Francisco, Cal.  
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 Glauber Brass Mfg. Co., Cleveland, O.  
 Grinnell Company, Providence, R. I.  
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 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 High Pressure Fittings & Valve Co., Paterson, N. J.  
 Hoffman Mfg. Co., B., Milwaukee, Wis.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Jarecki Mfg. Co., Erie, Pa.  
 Jenkins Mfg. Co., New York, N. Y.  
 Johnson Service Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lavinge Ball Solderless—Commonwealth Brass Corp., Detroit, Mich.  
 Little, M. S., Mfg. Co., Hartford, Conn.  
 Loyal Brass Co., Cleveland, O.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
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 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
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 Nichol, Thos. J., & Co., Cincinnati, O.  
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- ♦ **Walworth Mfg. Co.,** Boston, Mass.
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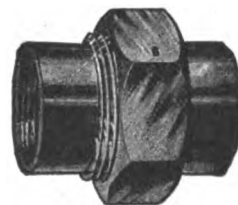
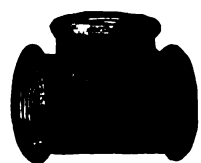
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Morton—F. B. Morton, Los Angeles, Cal.  
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Clow, James B., & Sons, Chicago, Ill.  
Crook-Kries & Co., Baltimore, Md.  
Direct Separator Co., The, Syracuse, N. Y.  
Donaldson Iron Co., Emaus, Pa.  
Eastwood Wire Mfg. Co., Belleville, N. J.  
Economic—The Economic Specialty Co., Chicago, Ill.  
Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
Essex Foundry, Newark, N. J.  
Ford & Kendig Co., Philadelphia, Pa.  
Fox, John, & Co., New York, N. Y.  
Franklin Pipe & Foundry Co., Chicago, Ill.  
General Fire Extinguisher Co., Providence, R. I.  
General Pipe & Foundry Co., Atlanta, Ga.  
Georgia Iron Works, Augusta, Ga.  
Glenn Mfg. Co., St. Charles, Ill.  
Grinnell Company, Providence, R. I.  
Hoffmann Mfg. Co., B., Milwaukee, Wis.  
Illinois Malleable Iron Co., Chicago, Ill.  
Jerkerson Union Co., Lexington, Mass. (union).  
Kaltenthaler, H. J., Philadelphia, Pa.  
◆ Kelly & Jones Co., Greensburg, Pa.  
Kellogg, M. W., Co., New York, N. Y.  
Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
Limbirt & Co., Geo. B., Chicago, Ill.  
Lynchburg Foundry Co., Lynchburg, Va.  
Materne Mfg. Co., St. Louis, Mo.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Modern Iron Works, Quincy, Ill.  
National Pipe & Foundry Co., Attalla, Ala.  
Co., Sales Agents, Richmond, Va., and Birmingham, Ala.  
Peerless Foundry Co., Pittsburgh, Pa.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
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- ◆ **Kelly & Jones Co., The,** Greensburg, Pa.
- National Foundry Co. of N. Y., Inc., Brooklyn, N. Y.
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- Thrush—H. A. Thrush & Co., Peru, Ind.
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- Materne Mfg. Co., St. Louis, Mo.
- ◆ **Walworth Mfg. Co.,** Boston, Mass.
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- Simmons, John, Co., New York, N. Y.
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- Osborne High Pressure Joint & Valve Co., Chicago, Ill.
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- Toledo—Franklin Williams, Inc., New York, N. Y.
- ◆ **Watson-Stillman Co.,** The, Aldene, N. J.
- ◆ **Walworth Mfg. Co.,** Boston, Mass.
- Wood, William H., Media, Pa.

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- Kaltenthaler, H. J., Philadelphia
- ◆ **Kelly & Jones Co., The,** Greensburg, Pa.
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- Simmons Co., John, New York, N. Y.
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- Detroit Brass & Malleable Works, Detroit, Mich.
- Devlin Mfg. Co., Thos., Philadelphia, Pa.
- Dresser—S. R. Dresser Mfg. Co., Bradford, Pa.
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- Flagg & Co., Stanley G., Philadelphia, Pa.
- Fleck Bros. Co., Philadelphia, Pa.
- Grabler—Grabler Mfg. Co., Cleveland, O.
- High Pressure Fitting & Valve Co., Paterson, N. J.

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 Jarecki Mfg. Co., Erie, Pa.  
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 Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Conn.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Pittsburgh Valve, Foundry & Construction Co., Pitts-  
 burgh, Pa.  
 Redington Standard Fitting Co., Bethlehem, Pa.  
 U—Chas. Miller & Sons Co., Utica, N. Y.  
 Simmons, John, Co., New York, N. Y.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.  
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 Haydenville Co., Haydenville, Mass.  
**Sanitary Company of America**, Linfield, Pa.  
 S. F. Co.—Standard Foundry Co., Anniston, Ala.  
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 Wolverine Foundry Co., Detroit, Mich.

**FITTINGS, SPECIAL, SHEET STEEL.**

American Spiral Pipe Works, Chicago, Ill.  
 BB—Boston Brass Co., Waltham, Mass.  
 Standard Spiral Pipe Works, Chicago, Ill.

**FITTINGS, SPRINKLER SYSTEM.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 General Fire Extinguisher Co., Providence, R. I.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lambert & Co., Geo. B., Chicago, Ill.  
 Rockwood Sprinkler Co. of Massachusetts, Worcester, Mass.

**FITTINGS, STABLE.**

Sanitary Company of America, Linfield, Pa.

**FITTINGS, URN.**

♦ McRae & Roberts Co., The, Detroit, Mich.

**FITTINGS, VENT.**

Acheson Mfg. Co., Rankin, Pa.  
 Advance—Zura Mfg. Co., Erie, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Boston Brass Co., Waltham, Mass.  
 Clow—James B. Clow & Sons, Chicago, Ill.  
 D. C. Mfg. Co., The, Canton, O.  
 Essex Foundry, Newark, N. J.  
 Franklin Pipe & Foundry Co., Chicago, Ill.  
 Fries & Co., Buffalo, N. Y.  
 Gopher—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Jumbo Heater & Mfg. Co., Cleveland, O.  
 Manhoff—Sanitary Company of America, Linfield, Pa.  
 Park & McKay Co., The, Detroit, Mich.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Sanitary Company of America, Linfield, Pa.  
 Swett Iron Work, A. L., Medina, N. Y.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Union Machine Works, Oakland, Cal.  
 United Brass Mfg. Co., Cleveland, O.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Wolverine Brass Works, Grand Rapids, Mich.

**FITTINGS, WELL CASING.**

♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Newbury, Jay Herbert, Goshen, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.

**FITTINGS, WIRE ROPE.**

American Crosby—American Hoist & Derrick Co., St. Paul, Minn.  
 American Cable Clip Co., New York, N. Y.  
 ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
 American Steel & Wire Co., Chicago, Ill.  
 Bull Dog—Lamson & Sessions Co., Cleveland, O.  
 Clyde Iron Works, Duluth, Minn.  
 Columbus Bolt Co., Columbus, O.  
 Double Grip—Lamson & Sessions Co., Cleveland, O.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Hallett Iron Works, The, Harvey, Ill.  
 Lanz, M., & Sons, Pittsburgh, Pa.  
 Mockbee—Mockbee, C. M., Cincinnati, O.  
 Monarch—Macomber & White Rope Co., Kenosha, Wis.  
 Moon, George C., Co., Garwood, N. J.  
 National Malleable Casting Co., Cleveland, O.  
 Newhall Chain Forge & Iron Co., New York, N. Y.  
 Union Elevator & Machine Co., Chicago, Ill.  
 Upson-Walton—The Upson-Walton Co., Cleveland, O.  
 ♦ Waterbury Co., New York, N. Y.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Williamsport Wire Rope Co., Williamsport, Pa.  
 Wood Supply Co., The J. R., Cincinnati, O.

**FIXTURES, ALIGNING AND STRAIGHTENING.**

Allen Wrench & Tool Co., Providence, R. I.

**FIXTURES, ANGLE UNIVERSAL.**

Nelson Tool & Machine Co., Newark, N. J.  
 Reid Bros. Co., Inc., Beverly, Mass.

**FIXTURES, BASIN AND BATH, SUPPLY AND WASTE.**

(See "Traps" and "Wastes.")

**FIXTURES, BURNING.**

Chapin-Skelton Corp., Syracuse, N. Y.

**FIXTURES, HARDWARE STORE.**

Duluth Show Case Co., Duluth, Minn.  
 Economical—J. D. Warren Mfg. Co., Chicago, Ill.  
 Standard, Standard B—J. D. Warren Mfg. Co., Chicago, Ill.

**FIXTURES, INDEXING, FOR MACHINE TOOLS.**

Brandt & Carpenter, New Britain, Conn.

**FIXTURES, TOILET PAPER.**

(See "Cabinets, Toilet Paper.")

**FLAKERS, CAUSTIC.**

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

**FLANGES, AMMONIA.**

(See also "Fittings, Ammonia.")

Crane—Crane Co., Chicago, Ill.  
 Fulton Machine & Forging Co., Canal Fulton, O.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Walworth Mfg. Co., Boston, Mass.  
 Williams, J. H., & Co., Brooklyn, N. Y.

**FLANGES, BIBE AND COCK.**

American Brass Mfg. Co., The, Cleveland, O.  
 Ampinco—American Fin Co., Waterbury, Conn.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Haydenville Co., The, Haydenville, Mass.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 ♦ McRae & Roberts Co., The, Detroit, Mich.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Monarch Brass Co., Cleveland, O.  
 New Jersey Tube Co., New York.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 Wise, J. B., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**FLANGES, BOILER.**

American Spiral Pipe Works, Chicago, Ill.  
 Central City Iron Works, Stevens Point, Wis.  
 Munroe, R., & Sons, Mfg. Corp., Pittsburgh, Pa.  
 O'Leary, Arthur J., & Sons Co., Chicago, Ill.  
 Scully Steel & Iron Co., Chicago, Ill.

**FLANGES, CLOSET, FLOOR.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Ampinco—American Fin Co., Waterbury, Conn.  
 Ayling & Reichert Co., Toledo, O.  
 B. B. Specialty Co., Pittsburgh, Pa.  
 Boosey—Greenwood Mfg. Co., Detroit, Mich.  
 Cardinal—Clarksville Fdy. & Machine Works, Clarks-ville, Tenn.  
 Columbus—Columbus Brass Co., Columbus, O.  
 C. C.—Crane Co., Chicago, Ill.  
 Clipper—Clipper Tool Co., Buffalo, N. Y.  
 Cosgrove—Standard Sanitary Mfg. Co., Pittsburg.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Donovan, Pres-O-Flex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Durham—Acheson Mfg. Co., Braddock, Pa.  
 Durham—Columbus Brass Co., Columbus, O.  
 Durham—Prier Brass Mfg. Co., Kansas City, Mo.  
 Durham—Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Durst Mfg. Co., The, New York, N. Y.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Eljer—Eljer Co., Cameron, W. Va.  
 Essex Foundry, Newark, N. J.  
 Frank Bros., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 I. & M.—The Ireland & Matthews Mfg. Co., Detroit, Mich.  
 Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
 I. X. L. Pump & Mfg. Co., The, Philadelphia, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 K.T.—U. S. Sherardizing Co., New Castle, Pa.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Keystone Brass Works, Inc., Erie, Pa.  
 Kitson Co., Philadelphia, Pa.  
 Liberty Mfg. Co., The, East Norwalk, Conn.  
 Loyal Brass Co., Cleveland, O.  
 Maddocks, Thos., & Sons Co., Trenton, N. J.  
 Martin—Martin, Ft. Wayne, Ind.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Mechanical Rubber Co., Cleveland, O.  
 Mills Brass Co., W. A., Port Chester, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 Monarch Brass Co., The, Cleveland, O.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Nunn Brass Works, Rochester, N. Y.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Pres-O-Flex—Cosgrove & Cosgrove Co., New York.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Regulo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Republic—Stringer Bros. Foundry Co., Chicago, Ill.  
 Rudolph—John D. Johnson, Philadelphia, Pa.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.



**Sanitary Company of America**, Linfield, Pa.  
**Sanitary Universal—Eljer Co.**, Cameron, W. Va.  
**Savillis Sons**, Thomas, Philadelphia, Pa.  
**Standard Brass Mfg. Co.**, Utica, N. Y.  
**Street & Kent Mfg. Co.**, Chicago, Ill.  
**Surette—Trenjer Specialty Co.**, Trenton, N. J.  
**3-S—The Sanitary Specialty Co.**, Newark, N. J.  
**Trenton Brass & Machine Co.**, The, Trenton, N. J.  
**Trenton Potteries Co.**, The, Trenton, N. J.  
**Union Brass & Metal Mfg. Co.**, St. Paul, Minn.  
**Wade—Wade Iron Sanitary Mfg. Co.**, Chicago, Ill.  
**Waterbury Mfg. Co.**, Waterbury, Conn.  
**Wolverine Brass Works**, Grand Rapids, Mich.  
 ♦ **Worcester Pressed Steel Co.**, Worcester, Mass.  
**Woodward-Wanger Co.**, Philadelphia, Pa.  
**Zurn, J. A., Mfg. Co.**, Erie, Pa.

**FLANGES, DECK.**

**Richardson Brass Co.**, Edro, Baltimore, Md.

**FLANGES, PIPE, ADJUSTABLE WEDGE.**

**American District Steam Co.**, N. Tonawanda, N. Y.

**FLANGES, PIPE, ANGLE IRON.**

**American Spiral Pipe Works**, Chicago, Ill.  
**Essex Foundry**, Newark, N. J.

**FLANGES, PIPE, BLIND.**

**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**C—Crane Co.**, Chicago, Ill.  
**Essex Foundry**, Newark, N. J.  
**Illinois Malleable Iron Co.**, Chicago, Ill.  
**Kaltenthaler, H. J.**, Philadelphia, Pa.  
 ♦ **Kelly & Jones Co.**, Greensburg, Pa.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
**Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Pittsburgh Valve Foundry & Const. Co.**, The, Pittsburgh, Pa.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE, BRASS, NICKEL PLATE.**

(See also "Escutcheons.")

**American Brass & Copper Co.**, The, New York.  
**American Brass Mfg. Co.**, The, Cleveland, O.  
**American Brass Novelty Co.**, Grand Haven, Mich.  
**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**American Sanitary Mfg. Co.**, Abingdon, Ill.  
**Ampinco—American Fin Co.**, Waterbury, Conn.  
**Barnard Mfg. Co.**, Spokane, Wash.  
**Boekel & Co., Wm.**, Philadelphia, Pa.  
**Burlington Brass Works**, Burlington, Wis.  
**Church Mfg. Co., C. F.**, Holyoke, Mass.  
**Clean Sweep—Detroit Sanitary Supply Co.**, Detroit, Mich.  
**Crook-Kries & Co.**, Baltimore, Md.  
**C—Crane Co.**, Chicago, Ill.  
**Edna Brass Mfg. Co.**, The, Cincinnati, O.  
**Exeter Brass Works**, Exeter, N. H.  
**Federal-Huber Co.**, Chicago, Ill.  
**Fries & Co.**, Buffalo, N. Y.  
**Frost Mfg. Co.**, Kenosha, Wis.  
**General Fire Extinguisher Co.**, New York, N. Y.  
**Glauber Brass Mfg. Co.**, Cleveland, O.  
**Hamlin & Emery Brass Co.**, The, Boston, Mass.  
 ♦ **Jenkins Bros.—Jenkins Bros.**, New York, N. Y.  
**Kaltenthaler, H. J.**, Philadelphia, Pa.  
 ♦ **Kelly & Jones Co.**, Greensburg, Pa.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
**McDonald Mfg. Co., A. Y.**, Dubuque, Ia.  
**McNab & Harlin Mfg. Co.**, New York, N. Y.  
**Maltby, Geo. W., & Sons Co.**, Buffalo, N. Y.  
**Mitchell & Co., Inc., W. K.**, Philadelphia, Pa.  
**Monarch Brass Co.**, The, Cleveland, O.  
**National Brass Mfg. Co.**, Rochester, N. Y.  
**Newman Mfg. Co.**, The, Cincinnati, O.  
**New Jersey Tube Co.**, New York.  
**Perkes Co., Charles**, Philadelphia, Pa.  
**Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Pittsburgh Valve Foundry & Construction Co.**, Pittsburgh, Pa.  
 ♦ **Powell Co., The Wm.**, Cincinnati, O.  
**Powhatan Brass & Iron Works**, Ranson, W. Va.  
**Richardson, Edro, Brass Co.**, Baltimore, Md.  
**Salem Brass & Iron Mfg. Co.**, Salem, N. J.  
**Stimpson Co., Edwin B.**, Brooklyn, N. Y.  
**Sundberg, J. A., Co.**, Chicago, Ill.  
**Trenton Brass & Machine Co.**, The, Trenton, N. J.  
 ♦ **United—United Brass Mfg. Co.**, Cleveland, O.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.  
**Waterbury Mfg. Co.**, Waterbury, Conn. (sheet brass).  
**Wolverine Brass Works**, Grand Rapids, Mich.

**FLANGES, PIPE, CAST IRON.**

**Abendroth & Root Mfg. Co.**, Newburgh, N. Y.  
**American District Steam Co.**, Lockport, N. Y.  
**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**Bard Patent—The Bard Union Co., Inc.**, Norwich, Conn.  
**Barnard Mfg. Co.**, Spokane, Wash.  
**Belfield Co., H.**, Philadelphia, Pa.

**Climax—Best Mfg. Co.**, Pittsburg, Pa.  
**Clow, James B., & Sons**, Chicago, Ill.  
**C—Crane Co.**, Chicago, Ill.  
**Crook—H. E. Crook Co., Inc.**, Baltimore, Md.  
**Devlin, Thos., Mfg. Co.**, Philadelphia, Pa.  
**Direct Separator Co.**, The, Syracuse, N. Y.  
**Edna Brass Mfg. Co.**, The, Cincinnati, O.  
**Essex Foundry**, Newark, N. J.

♦ **Fisher Governor Co.**, The, Marshalltown, Ia.  
**Ford & Kendig Co.**, Philadelphia, Pa.  
**Franklin Pipe & Foundry Co.**, Chicago, Ill.  
**General Fire Extinguisher Co.**, Providence, R. I.  
**General Pipe & Foundry Co.**, Atlanta, Ga.  
**Glenn Mfg. Co.**, St. Charles, Ill.  
**Grinnell Company**, Providence, R. I.  
**Gullerland Foundry Co.**, Gullerland, N. Y.  
**Hoffman Mfg. Co., B.**, Milwaukee, Wis.  
**Illinois Malleable Iron Co.**, Chicago, Ill.  
 ♦ **Jenkins Bros.—Jenkins Bros.**, New York, N. Y.  
**Kaltenthaler, H. J.**, Philadelphia, Pa.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
**Lutz Company, Inc.**, Philadelphia, Pa.  
**McNab & Harlin Mfg. Co.**, New York, N. Y.  
**Mecklenburg Iron Works**, Charlotte, N. C.  
**Meese & Gottfried Co.**, San Francisco, Cal.  
**Mitchell & Co., Inc., W. K.**, Philadelphia, Pa.  
**Modern Iron Works**, Quincy, Ill.  
**National Valve & Mfg. Co.**, Pittsburg, Pa.  
**Newbury, Jay H., & Son**, Goshen, N. Y. (Extra heavy).  
**Newbury Mfg. Co.**, Monroe, N. Y.  
**Oil Well Supply Co.**, Pittsburg, Pa.  
**Peerless Foundry Co.**, Pittsburgh, Pa.  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Pittsburgh Valve Foundry & Construction Co.**, The, Pittsburgh, Pa.  
 ♦ **Powell, Wm., Co.**, The, Cincinnati, O.  
**Powhatan Brass & Iron Works**, Charles Town, W. Va.  
**Rensselaer Valve Co.**, Troy, N. Y.  
**Van Stone—Best Co.**, Pittsburgh, Pa.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE, STEEL.**

♦ **Jenkins Bros.**, New York, N. Y.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
**Reading Valve & Fittings Co.**, Reading, Pa.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE, COMPANION.**

**Amco—Amco Sales Corp.**, Chicago, Ill.  
**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**Crosby Steam Gage & Valve Co.**, Boston, Mass.  
**Essex Foundry**, Newark, N. J.  
**Flagg, Stanley G., & Co.**, Philadelphia, Pa.  
**Illinois Malleable Iron Co.**, Chicago, Ill.  
 ♦ **Jenkins Bros.—Jenkins Bros.**, New York, N. Y.  
**Kaltenthaler, H. J.**, Philadelphia, Pa.  
 ♦ **Kelly-Jones Co.**, The, Greensburg, Pa.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
 ♦ **Lunkenheimer Co.**, The, Cincinnati, O.  
**O'Leary, Arthur, & Son**, Co., Chicago, Ill.  
 ♦ **Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Pittsburgh Valve Foundry & Construction Co.**, The, Pittsburgh, Pa.  
 ♦ **Powell Co., The Wm.**, Cincinnati, O. (brass or iron).  
**Rensselaer Mfg. Co.**, Troy, N. Y.  
**Richardson, Edro, Brass Co.**, Baltimore, Md.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE, CURVED.**

**Kaltenthaler, H. J.**, Philadelphia, Pa.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.  
**Limbirt & Co., Geo. B.**, Chicago, Ill.  
**McNab & Harlin Mfg. Co.**, New York, N. Y.  
**Newbury, Jay Herbert**, Goshen, N. Y.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE ECCENTRIC.**

(See also "Fittings, Pipe Eccentric.")

**Bard Patent—The Bard Union Co., Inc.**, Norwich, Conn.

**FLANGES, PIPE, FLOOR.**

**Detroit Valve & Fittings Co.**, Wyandotte, Mich.  
**Flagg & Co., Stanley G.**, Philadelphia, Pa.  
**Illinois Malleable Iron Co.**, Chicago, Ill.  
**Modern Mfg. Co.**, The, Cleveland, O.  
**Newbury, Jay Herbert**, Goshen, N. Y.  
**Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Robinson Mfg. Co.**, The, Cleveland, O.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

**FLANGES, PIPE, INSULATING.**

**XX Century—Atwood & Morill**, Salem, Mass.

**FLANGES, PIPE, MALLEABLE IRON.**

**Devlin, Thomas, Mfg. Co.**, Philadelphia, Pa.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

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- Essex Foundry, Newark, N. J.  
Kaltenthaler, H. J., Philadelphia, Pa.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Limbert & Co., Geo. B., Chicago, Ill.  
McNab & Harlin Mfg. Co., New York, N. Y.

#### FLANGES, PIPE, SEMI-STEEL.

- C.—Crane Co., Chicago, Ill.  
Kaltenthaler, H. J., Philadelphia, Pa.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Limbert & Co., Geo. B., Chicago, Ill.

#### FLANGES, PIPE, SHRINK.

- Essex Foundry, Newark, N. J.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Limbert & Co., Geo. B., Chicago, Ill.

#### FLANGES, PIPE, STEEL.

- American Spiral Pipe Works, Chicago, Ill.  
C.—Crane Co., Chicago, Ill.  
Glasgow—Glasgow Iron Co., Philadelphia, Pa.  
♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
Kaltenthaler, H. J., Philadelphia, Pa.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Limbert & Co., Geo. B., Chicago, Ill.  
Kennedy-Stroh Corp., Pittsburgh, Pa.  
Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
Simmons—John Simmons Co., New York, N. Y.  
(Rolled steel).  
Standard Spiral Pipe Works, Chicago, Ill.  
♦ Walworth Mfg. Co., Boston, Mass.

#### FLANGES, PIPE, UNION.

(See "Unions, Flange.")

#### FLANGES, PIPE, WROUGHT IRON.

- Bonney Forge & Tool Works, Allentown, Pa.  
Devlin Mfg. Co., Thos., Philadelphia, Pa.  
Glasgow—Glasgow Iron Works, Pottstown, Pa.  
Kellogg Co., The W. M., New York, N. Y.  
♦ Kelly & Jones Co., The, Greensburg, Pa.

- Limbert & Co., Geo. B., Chicago, Ill.  
National Brass Mfg. Co., Rochester, N. Y.  
Pittsburg Valve Foundry & Construction Co., Pittsburg, Pa.  
♦ Powell Co., The Wm., Cincinnati, O.

#### FLANGES OR FLASHINGS, ROOF.

- Acme Mfg. Co., Bangor, Me.  
Any Angle Pipe—Canton Supply Co., Canton, O.  
Bell—Bell Specialty Co., Des Moines, Ia.  
Bullard—The Bullard Specialty Co., Tiffin, O.  
Decatur Cornice & Roofing Co., Inc., Albany, Ala.  
Eagle—Eagle-Picher Lead Co., Cincinnati, O.  
Essex Foundry, Newark, N. J.  
Fife—Canton Supply Co., Canton, O.  
Franklin Pipe & Foundry Co., Chicago, Ill.  
Holt—The Barrett Co., New York.  
Hub Patent—Bourneuf Corporation, Louis, Lyma, Mass.  
Key—The Roof Flash & Vent Fitting Co., Washington, D. C.  
L. B.—L. B. Brass Co., Peabody, Mass.  
McGuire's—H. E. Hessler Co., Syracuse, N. Y.  
Midland—Midland Metal Mfg. Co., Kansas City, Mo.  
Modern—Mechanicville Specialty Supply Mfg. Co., Mechanicville, N. Y.  
Moore—F. J. Moore, Minneapolis, Minn.  
Overton—Sheet Metal Products Co., Duluth, Minn.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Retlaw—Harker Mfg. Co., Cincinnati, O.  
Simplex Mfg. Co., Chicago, Ill.



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Witch Mfg. Co., Salem, Mass.  
Wizard Mfg. Co., Boston, Mass.

#### FLANGES, STEEL RIVETING.

- Glasgow Iron Co., Philadelphia, Pa.

#### FLANGES, TANK.

- ♦ Michigan Lubricator Co., Detroit, Mich.  
Midland Brass Works, Inc., The, Fort Worth, Texas.

#### FLANGES, WALL, ROSE.

- ♦ Hays Mfg. Co., Erie, Pa.

#### FLASKS, CARBIDE, MINERS.

- Grier Brothers Co., Pittsburgh, Pa.

#### FLASKS, SNAP, POUNDING.

- Adams—The Adams Co., Dubuque, Ia.  
American—American Foundry Equipment Co., New York.  
Arcade Mfg. Co., Freeport, Ill.  
Baldwin, Tuthill & Bolton, Grand Rapids, Mich.  
Berger Mfg. Co., The, Canton, O.  
Berkshire Mfg. Co., The, Cleveland, O.  
Buch Foundry Equipment Co., York, Pa.  
♦ Champion—Western Tool & Mfg. Co., Springfield, O.  
Clark, W. J., Co., Salem, O.  
Columbiana Boiler Co., Columbiana, O.  
Federal Foundry Supply Co., The, Cleveland, O.  
Grabo, E. O., New York, N. Y.  
Jurack, Chas., Co., The, Milwaukee, Wis.  
Northern Engineering Works, Detroit, Mich.  
Obermayer Co., The, Cincinnati, O.  
Osborn Mfg. Co., Cleveland, O.  
Paxson Co., J. W., Philadelphia, Pa.  
Reeves Bros. Co., Alliance, O.  
Smith Foundry Supply Co., J. D., Cleveland, O.

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Truscon Steel Co., Youngstown, Ohio.  
Webb, J. F., Mfg. & Supply Co., Davenport, Ia.  
Whiting Fdy. Equipment Co., Harvey, Ill.  
Woods, T. B., Sons Co., Chambersburg, Pa.

### FLIGHTS, CONVEYOR.

Bowsher, N. P., Co., The, South Bend, Ind.

### FLOATS, CARBURETER.

Weber Bros. Metal Works, Chicago, Ill.

### FLOATS, CLOSET TANK, CHINA AND PORCELAIN ENAMELED.

Camden Pottery Co., Camden, N. J.  
Maddock & Sons, John, Trenton, N. J.  
Universal Sanitary Mfg. Co., New Castle, Pa.

### FLOATS, COPPER, CLOSET TANK.

American Brass & Copper Co., The, New York, N. Y.  
Ampinco—American Fin Co., Waterbury, Conn.  
B. B.—Boston Brass Co., Waltham, Mass.  
Blessing, C. A., Philadelphia, Pa.  
Boekel & Co., Wm., Philadelphia, Pa.  
Consolidated Mfg. Co., Dayton, O.  
Detroit Metal Spinning Co., Detroit, Mich.  
Durat Mfg. Co., The, New York, N. Y.  
Emery, Wm. S., New York, N. Y.  
Federal-Huber Co., Chicago, Ill.  
Frost Mfg. Co., The, Kenosha, Wis.  
Gerstein Bros. & Cooper, South Boston, Mass.  
Good—Good Mfg. Co., Inc., New York, N. Y.  
Haydenville Co., Haydenville, Mass.  
Hogan—The Hogan Mfg. Co., Hartford, Conn.  
Indestructible—The Templeton Mfg. Co., Cambridge,  
Mass.

Kantleak—Wolverine Brass Works, Grand Rapids,  
Mich.

Loyal Brass Co., Cleveland, O.  
Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
Naugatuck Seamless—Naugatuck Mfg. Co., Naugatuck,  
Conn.

New Jersey Tube Co., New York.  
No-Sol—The Ayling & Reichert Co., Toledo, O.  
No Solder—Haines, Jones & Cadbury Co., Philade-  
phia, Pa.

Pfau Mfg. Co., Cincinnati, Ohio.  
Perfect—American Fin Co., Waterbury, Conn.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
Rome Sanitary Co., Rome, N. Y. (solderless).  
Schwab Bros. Co., New York, N. Y.  
Standard Brass Mfg. Co., Utica, N. Y.  
Star—U. T. Hungerford Brass & Copper Co., New  
York.

Union Brass & Metal Mfg. Co., St. Paul, Minn.  
Union Metal Works, Chelsea, Mass.  
Union—Union Sanitary Supply, Union City, Ind.  
Waterbury Mfg. Co., Waterbury, Conn.  
Webco—F. W. Webb Mfg. Co., Boston, Mass.  
Weber Bros. Metal Works, Chicago, Ill.  
Wonder—American Fin Co., Waterbury, Conn.  
Woodward-Wanger Co., Philadelphia, Pa.

### FLOATS, COPPER, STEAM TRAP AND BOILER.

American Mfg. Co., Dayton, O.  
Anderson Co., The V. D., Cleveland, O.  
Consolidated Mfg. Co., Dayton, Ohio.  
Dahquist Mfg. Co., Boston, Mass.  
Everlasting—John Douglas Co., The, Cincinnati, O.  
Fisher Governor Co., Inc., Marshalltown, Ia.

THE ORIGINAL 35 YEARS AGO STANDARD EVER SINCE

Safety Water Columns  Steam Traps  
Gauge Cocks Water Gauges  
Seamless Copper Floats

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RELiance GAUGE COLUMN CO. 5910 CARNEGIE AVE. CLEVELAND OHIO.

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## Brazing Compound

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Write for Prices

Krembs & Company, Manufacturing  
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173 N. Green St.

Chicago, Ill.



Gerstein Bros. & Cooper, South Boston, Mass.  
Harris—Arthur Harris & Co., Chicago, Ill.  
Hercules—Hercules Float Works, Springfield, Mass.  
Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
Monash—Monash Younger Co., Chicago, Ill.  
Naugatuck Mfg. Co., Naugatuck, Conn.  
Parkinson—Parkinson Mfg. Co., Ashland, O.  
Reliance Gauge Column Co., Cleveland, O. (Seam-  
less.)  
Roberts Steam Specialty Co., Cleveland, O.  
Weber Bros. Metal Works, Chicago, Ill.

### FLOATS, GLASS, CLOSET TANK.

Burr Mfg. & Supply Co., The, Brooklyn, N. Y.  
C. D.—Charles Dargent, Brooklyn, N. Y.  
Dimock & Fink Co., New York, N. Y.  
Everlasting—John Douglas Co., Cincinnati, O.  
Lehnert & Co., New York City.

### FLOATS, SEAMLESS STEEL, FOR STEAM TRAPS.

Reliance Gauge Column Co., Cleveland, O.

### FLOATS, IRON.

Consolidated Mfg. Co., Dayton, O.  
Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
Weber Bros. Metal Works, Chicago, Ill.

### FLOORING, ASPHALT.

Mastic—Johns-Manville, Inc., New York, N. Y.

### FLUES, BOILER.

(See "Tubes, Boiler.")

### FLUMES, FLACER MINING.

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Hindley & Pendleton Co., The, Brooklyn, N. Y.  
Iron Friend—Great Western Smelting & Refining Co.,  
Chicago, Ill.

### FLUSHERS, SEWER.

Burns—Reliance Mfg. Co., Pasadena, Calif.

### FLUX AND DEOXIDIZER IN BRASS AND BRONZE.

Metallic Phosphoro—New Era Mfg. Co., Kalamazoo,  
Mich.

### FLUX, GALVANIZING

Stanbrite—United American Metals Corp., Brooklyn,  
N. Y.

### FLUXES, SOLDERING STICKS AND PASTE, FOR ANY METAL, INCLUDING ALUMINUM.

Fluxine—Krembs & Company, Chicago, Ill.  
Allen, L. B., Co., Inc., Chicago, Ill.  
McGill Mfg. Co., Valparaiso, Ind.  
Red Letter—Ruby Chemical Co., Columbus, Ohio.  
Ruby Fluid—Ruby Chemical Co., The, Columbus, O.

### FLUX, FOUNDRY AND WELDING.

Admiral—Admiral Welding Machine Co., Kansas City,  
Mo.  
Anti-Borax—Anti-Borax Compound Co., Ft. Wayne,  
Ind.  
Easy Flow, Metal Cast, Ruby, Universal—Torchweld  
Equipment Co., Chicago.  
Imperial—Imperial Brass Mfg. Co., Chicago, Ill.  
Miller, Keystone, Radioclarite—Basic Mineral Co.,  
The, Pittsburgh, Pa. (iron and semi-steel for  
brass, bronze and non-ferrous metals).  
Sandoval—Sandoval Zinc Co., Chicago, Ill.  
Star—Cortland Welding Compound Co., Cortland, N. Y.  
Triangle B—C. G. Buchanan Chemical Co., Cincinnati,  
Ohio.

### FORGES.

American Gas Furnace Co., Elizabeth, N. J.  
Baldwin, Tuthill & Bolton, Grand Rapids, Mich.  
Beach-Russ Co., Brooklyn, N. Y. (gas and gasoline).  
Boynton & Plummer, Inc., Worcester, Mass.  
Bradley & Son, C. C., Syracuse, N. Y. (power).

Buffalo Dental Mfg. Co., Buffalo, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Challenge, Chicago, Hero, Leader, Royal—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
 Crowe—Paul L. Crowe, Jersey City, N. J.  
 Eclipse—Eclipse Fuel Engineering Co.  
 Franklin Tool Works, Inc., Seattle, Wash.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Patterson—Brown & Patterson, Brooklyn, N. Y.  
 Rockwell, W. S., Co., New York, N. Y.  
 Scientific—Springfield Forge Co., Springfield, O.  
 Scientific—The Fairbanks Co., New York, N. Y.  
 Star Mfg. Co., The, New Lexington, O.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Universal—Canton Foundry & Machine Co., The, Canton, O.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Western Chief—Canedy-Otto Mfg. Co., Chicago Heights, Ill.

#### FORGES, AIR.

Buffalo Forge Co., Buffalo, N. Y.  
 Gunnell—Manitowoc Ship Building Co., Manitowoc, Wis.

FORGES, BRAZING, KEROSENE OR GASOLINE.  
 Turner Brass Works, The, Sycamore, Ill.

#### FORGES, DOWN DRAFT.

Oliver Machinery Co., Grand Rapids, Mich.

#### FORGES, ELECTRIC.

Champion Blower & Forge Co., Lancaster, Pa.

#### FORGES, OIL.

(See also "Furnaces or Forges, Rivet.")  
 American Shop Equipment Co., Chicago, Ill.  
 Anthony Co., The, Long Island City, N. Y.  
 Billow—National Supply Co., Chicago, Ill.  
 Buckeye—MacLeod Co., The, Cincinnati, O.  
 Ingersoll-Rand Co., New York, N. Y.  
 Rockwell Co., W. S., New York  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

#### FORGES, PORTABLE.

Advance—The Silver Mfg. Co., Salem, O.  
 Anthony Co., The, Long Island City, N. Y.  
 Buffalo—Buffalo Forge Co., Buffalo, N. Y.  
 ♦ Champion—Champion Blower & Forge Co., Lancaster, Pa.  
 Chapman—Chapman, H. L., Marcellus, Mich.  
 Chicago Pneumatic Tool Co., Chicago, Ill.  
 Cumming—Furness Bros., Chicago, Ill.  
 Lovejoy—Lovejoy Tool Works, Chicago, Ill.  
 ♦ Midway—Champion Blower & Forge Co., Lancaster, Pa.  
 National Supply Co., Chicago, Ill.  
 Rockwell, W. S., Co., New York, N. Y.  
 Scientific—Star Mfg. Co., New Lexington, O.  
 Tate, Jones & Co., Pittsburgh, Pa.  
 Watsons—Cleveland Steam Gauge Co., Cleveland, O.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

#### FORGES, RIVET.

(See "Furnace, Rivet, Heating.")

#### FORGES, SAW BRAKING.

♦ Machinery Co. of America, Big Rapids, Mich.

#### FORKS, FOR COAL, COKE, ETC.

Diamond, Fairmount, Geneva, Otsego, True Temper  
 —American Fork & Hoe Co., Cleveland, O.

#### FORKS, RAIL.

Anderson, W. H., Tool & Sup. Co., Detroit, Mich.  
 Atha Tool Co., Newark, N. J.  
 Beall Bros., Inc., Alton, Ill.  
 Hubbard & Co., Pittsburgh, Pa.  
 Iron City Tool Works, Pittsburgh, Pa.  
 Klein-Logan Co., The, Pittsburgh, Pa.  
 Oliver Iron & Steel Co., Pittsburgh, Pa.  
 St. Louis Frog & Switch Co., St. Louis, Mo.  
 Verona Tool Works, Pittsburgh, Pa.  
 Warren Tool & Forge Co., The, Warren, O.  
 Warwood Tool Co., Wheeling, W. Va.  
 Western Tool Forge Co., Brackenridge, Pa.

#### FORMERS, SLIP ROLL.

Ohl—Geo. A. Ohl & Co., Newark, N. J.

#### FORMS, BOILER SETTING.

Steel Mixture—McLeod & Henry Co., Troy, N. Y.  
 Wabash—Ford Meter Box Co., Wabash, Ind.

#### FORMS, CULVERT AND TILE, CONCRETE.

Blaw—Blaw-Knox Co., Pittsburgh, Pa.  
 Blue Ball Machine Works, Blue Ball, Pa.  
 Northwestern—Northwestern Steel & Iron Works, Eau Claire, Wis.  
 Polk-Genung Co., Fort Branch, Ind.

#### FORMS, METER BOX, CONCRETE.

Clark, W. H., Co., Mattoon, Ill.

#### FORMS, PIPE BENDING.

Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.

#### FOUNTAINS, DRINKING, ANTI-FREEZING.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Murdock—Murdock Mfg. & Supply Co., Cincinnati, O.

#### FOUNTAINS, DRINKING, CAST IRON.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Clow, James B. & Sons, Chicago, Ill.  
 Concord—Concord Foundry Co., Concord, N. H.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Stewart Iron Works, The, Cincinnati, O.  
 Toledo Mfg. & Supply Co., Toledo, O.

#### FOUNTAINS, DRINKING, FOR HORSES.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Imico—Illinois Malleable Iron Co., Chicago, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.

#### FOUNTAINS, DRINKING, MARBLE.

Dolphin—Crane-Hawley Co., Cincinnati, O.  
 Federal-Huber Co., Chicago, Ill.  
 Nelson, N. O., Marble Works, Edwardsville, Ill.  
 Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
 Rutland Marble Mfg. Co., Rutland, Vt.  
 Wolff's—Wolff Mfg. Co., Chicago, Ill.

#### FOUNTAINS, DRINKING, PORCELAIN.

Altruria—Crane Co., Chicago, Ill.  
 Clow—James B. Clow & Sons, Chicago, Ill.  
 Clyde—The Meyer-Sniffen Co., New York, N. Y.  
 Crystal—Eljer Co., Cameron, W. Va.  
 Crystal—The Peck Bros. & Co., New Haven, Conn.  
 Dubois—F. N. Dubois & Co., Inc., The, New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hygeia—The Peck Bros. & Co., New Haven, Conn.  
 Monarch—Wolff Mfg. Co., Chicago, Ill.  
 Monument—Monument Pottery Co., Trenton, N. J.  
 Mott, J. L., Iron Works, Trenton, N. J. (Trade names: Crystal, Stream, Purita, Puro.  
 Oxford—Walker Mfg. & Supply Co., Detroit, Mich.  
 Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
 Resolute Pottery Co., Trenton, N. J.  
 Rex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia.  
 Sands & Son Co., A. B., New York (ship).  
 Sterling—Walker Mfg. & Supply Co., Detroit, Mich.  
 Surety—The Meyer-Sniffen Co., New York, N. Y.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.  
 Trenjer—Trenjer Specialty Co., Trenton, N. J.  
 Unity-Madden's Patent—James B. Clow & Sons, Chicago, Ill.  
 University—The Peck Bros. & Co., New Haven, Conn.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### FOUNTAINS, DRINKING, PORCELAIN ENAMELED.

Champlain—The J. L. Mott Iron Works, Trenton, N. J.  
 Crane Co., Chicago, Ill. Trade names: Creta, Florian, Durus, Media, Luxton, Odette, Pergola, Tyrone, Whitney, Woodsley, Nedus, Altruria, Alcove.  
 Delaware—J. L. Mott Iron Works, Trenton, N. J.  
 Delta—Haines, Jones & Cadbury Co., Philadelphia.  
 De Soto—Haines, Jones & Cadbury Co., Philadelphia.  
 Detroit—J. L. Mott Iron Works, Trenton, N. J.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Federal-Huber Co., Chicago, Ill.  
 Glenmore—J. L. Mott Iron Works, Trenton, N. J.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler Co., Kohler, Wis.  
 Liberty—Humphreys Mfg. Co., Mansfield, Ohio.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Neptune—J. L. Mott Iron Works, Trenton, N. J.  
 Pacific Sanitary Mfg. Co., San Francisco, Cal.  
 Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia.  
 Rex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia.  
 Rundle Mfg. Co., Milwaukee, Wis.



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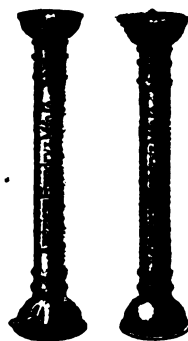
# AMERICAN BUBBLE FONTS

Sanitary, Anti-Freezing and Self-Closing

UNEQUALED FOR EFFICIENCY  
DURABILITY AND ECONOMY

Can be Repaired Without Digging Up

## American Foundry & Mfg. Co.



Saranac—J. L. Mott Iron Works, Trenton, N. J.  
Standard Sanitary Mfg. Co., Pittsburg, Pa.  
Wolff Mfg. Co., Chicago, Ill.

### FOUNTAINS, DRINKING, SANITARY (Bubbling).

Abingdon Sanitary Mfg. Co., Abingdon, Ill.  
Allen Sanitary—Allen Filter Co., Toledo, O.  
American Bubble—American Foundry & Mfg. Co., St. Louis, Mo.  
Ashton Valve Co., Boston, Mass.  
Blake's—Blake Hydraulic Valve Corp., Boston, Mass.  
Camden Pottery Co., Camden, N. J.  
Cantonment—Halsey W. Taylor Co., Warren, O.  
Casey-Hedges Co., Chattanooga, Tenn.  
Central Brass Mfg. Co., Cleveland, O.  
Chicago Pottery Co., Chicago, Ill.  
Crane Co., Chicago, Ill.  
Chi-Fau-Co.—The Chicago Faucet Co., Chicago, Ill.  
Clow, Jas. B., & Sons, Chicago, Ill.  
Crystal Stream—Glenwood—Purita—Puro—Saranac—J. L. Mott Iron Wks., New York.  
Douglas, John, Co., The, Cincinnati, Ohio.  
Ebco—The D. A. Ebinger Sanitary Mfg. Co., Columbus, Ohio.  
Economy—B. A. Spawm & Co., Newark, N. J.  
Edwardsville Brass Works, Edwardsville, Ill.  
Empire—Empire Brass Mfg. Co., Cleveland, O.  
Evercool—The Hart Mfg. Co., Louisville, Ky.  
Everson, C. G., & Co., Chicago, Ill.  
Federal-Huber Co., Chicago, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Hamrick-Tobey Co., Wausau, Wis.  
Ideal—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
Keith—Mfg. Equipment & Engineering Co., Framingham, Mass.  
Knott, L. E. Apparatus Co., Cambridge, Mass.  
Kretschmer—Kretschmer Mfg. Co., Dubuque, Ia.  
Kruecke Bros. Mfg. Co., Milwaukee, Wis.  
McCabe—The Linn-McCabe Co., Inc., Casey, Ill. (In connection with Hand Pump for country use).  
Meece—Manufacturing Equipment & Eng. Co., Boston, Mass.  
Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Mott, J. L. Iron Works, Trenton, N. J. Trade names—Cascade, Rideau, Saratoga, Parabola, Underwood, Crystal, Stream, Glenwood, Purita, Puro, Saranac.  
♦ Moulded Mica—H. W. Johns-Manville Co., New York.  
Mueller, H., Mfg. Co., Decatur, Ill.  
Nason Mfg. Co., New York.  
New Ideal—The Trenton Potteries Co., Trenton, N. J.  
Perfection—Rochester Germicide Co., Rochester, N. Y.  
Practico, Practicoal—Glauber Brass Mfg. Co., Cleveland, Ohio.  
Providence Steam Trap Co., Providence, R. I.  
Prostco—Providence Steam Trap Co., Providence, R. I.  
Puritan—Halsey W. Taylor Co., Warren, Ohio.  
Puro, Puro Junior—Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
Reading Foundry & Supply Co., Reading, Pa.  
Rex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia.  
Rochester Germicide Co., Rochester, N. Y.  
Royal Brass Mfg. Co., Cleveland, Ohio.  
Rundle Mfg. Co., Milwaukee, Wis.  
Rundle-Spence Mfg. Co., Milwaukee, Wis.  
Sanitary Fountain & Specialty Co., Boston, Mass.  
Sanitary—Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
Sanitas Non-Freezing—Sanitas Mfg. Co., Boston, Mass.  
Smith System Heating Co., Minneapolis, Minn.  
Sterling—Walker Mfg. & Supply Co., Detroit, Mich.  
Trenjer Specialty Co., Trenton, N. J.

20th Century—Twentieth Century Brass Works, Belleville, Ill.  
Waco—Walker Mfg. & Supply Co., Detroit, Mich.  
Waterman—Waterbury Co., Minneapolis, Minn. (Gravity only).  
♦ Watrous—Imperial Brass Mfg. Co., Chicago, Ill.  
Wheaton Brass Works, A. W., Newark, N. J.

### FOUNTAINS, DRINKING, VITAEUS CHINA.

Crane Co., Chicago, Ill. Trade names—Altruria, Ionia, Suspendo.  
Eljer Co., Cameron, W. Va. Trade names, Alcove, Argentine, Crystal, Duluth, Highland, Midget, Windsor.  
Federal-Huber Co., Chicago, Ill. (Trade names—Beloit, Evanston, Ford.)  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Iron Works, Trenton, N. J.  
Hygienic—Haines, Jones & Cadbury Co., Philadelphia.  
Junlata—J. L. Mott Iron Works, Trenton, N. J.  
Maddock's, Thomas, Sons Co., Trenton, N. J. Trade names—Madola, Madowel, Madanglo, Madaqua, Madaware, Madallian, Madorian.  
Monument—Monument Pottery Co., Trenton, N. J.  
Mott, J. L. Iron Works, Trenton, N. J. Trade names—Cascade, Parabola, Rideau, Saratoga, Telephone, Underwood.  
Pacific—Pacific Porcelain Ware Co., San Francisco, Calif.  
Ponce—Haines, Jones & Cadbury Co., Philadelphia.  
Puro Sanitary Drinking Fountain Co., Haydenville, Mass.  
Saxon, Rex, Ronjo—J. D. Johnson Co., Philadelphia.  
Sesco—Sanitary Earthenware Specialty Co., Trenton, N. J.  
Two Fired—Trenton Potteries Co., Trenton, N. J.  
Vitroware—Crane Co., Chicago, Ill.  
Watrous—The Watrous Co., Chicago, Ill.

### FOUNTAINS, LAWN.

Clow, James B., & Son, Chicago, Ill.  
Illinois Malleable Iron Co., Chicago, Ill.  
Mott, J. L. Iron Works, Trenton, N. J.  
Myers & Bro., F. E., Ashland, O.  
Rockland—J. L. Mott Iron Works, Trenton, N. J.  
Rundle-Spence Mfg. Co., Milwaukee, Ind.  
Stewart Iron Works Co., Cincinnati, O.  
University—Central Supply Co., Minneapolis, Minn.

### FOUNTAINS, WASH.

Bradley Wash Fountain Co., Milwaukee, Wis.

### FRAMES, BINDER, POWER TRANSMISSION.

Goldens Foundry & Machine Co., Columbus, Ga.  
Sprout, Waldron & Co., Muncy, Pa.  
♦ Wood's Sons Co., T. B., Chambersburg, Pa.

### FRAMES AND COVERS, WATER METERS.

Clow, James B., & Sons, Chicago, Ill.

### FRAMES, GRINDSTONE.

American Tool & Machine Co., Boston, Mass.  
Athol Machine & Foundry Co., Athol, Mass.  
Cleveland Stone Co., Cleveland, O.  
Fox Machine Co., Grand Rapids, Mich.  
Hoppen—J. E. Hoppen & Sons, Belleville, N. J.  
Oliver Machinery Co., Grand Rapids, Mich.  
Whitman & Barnes Mfg. Co., Akron, O.

### FRAMES, HACK SAW.

♦ Atkins, E. C., & Co., Indianapolis, Ind.  
Burro—Burroughs Tool Co., New York.  
Caldwell—Caldwell Tool Mfg. Co., Inc., New York.

- Crescent Co., Inc., The, Meriden, Conn.  
 ♦ Easy Grip—West Haven Mfg. Co., New Haven, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Griffin & Co., G. W., Franklin Falls, N. H.  
 Irvington Mfg. Co., Irvington, N. J.  
 Johnson, Wm., Newark, N. J.  
 Magazine—Millers Falls Co., New York.  
 ♦ Massachusetts Saw Works, Springfield, Mass.  
 Matchless—Bridgeport Hardware Mfg. Corp., Bridgeport, Conn.  
 Milford Master Grip—Henry G. Thompson & Son Co., New Haven, Conn.  
 Moore Bros., Jamestown, N. Y.  
 ♦ Napier Saw Works, Inc., Springfield, Mass.  
 Ohlen-Bishop Co., The, Columbus, O.  
 Red Devil—Smith & Hemenway Co., Irvington, N. J.  
 Simonds File Co., Fitchburg, Mass.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 Star—Millers Falls Co., New York, N. Y.  
 ♦ Starrett Co., The L. S., Athol, Mass.  
 ♦ Sterling—Diamond Saw & Stamping Works, Buffalo.  
 True Alm—Dikeman Mfg. Co., Norwalk, Conn.  
 Union Tool Co., Orange, Mass.  
 Union Hardware Co., Torrington, Conn.  
 ♦ Universal—The West Haven Mfg. Co., New Haven, Conn.  
 Utility—The West Haven Mfg. Co., New Haven, Conn.  
 Williamsburg Mfg. Co., Williamsburg, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**FRAMES, HAND SAW.**

- ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.

**FRAMES, LAUNDRY TRAY, STEEL.**

- Wesely—Wesely Co., Chas., Chicago, Ill.  
 Wessels—D. D. Wessels & Son, Detroit, Mich.

**FRAMES, MIRROR.**

- Edwardsville Brass Co., Edwardsville, Ill.  
 Nelson Marble Co., N. O., Edwardsville, Ill.  
 Powers Mfg. Co., J. P., Ossining, N. Y.

**FRAMES, SHAFT HANGER.**

- ♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

**FRAMES, SINK, ADJUSTABLE.**

- American Scale Co., Kansas City, Mo. (Not adj.).  
 Korff—Korff Mfg. Co., Lansing, Mich.  
 Sanitary—Jordan & Steele Mfg. Co., Hastings, Mich.  
 Wesely—Wesely Co., Chas., Chicago, Ill.

**FRAMES, WALL.**

- Golden's Foundry & Machine Co., Columbus, Ga.  
 Woods, T. B., Sons Co., Chambersburg, Pa.

**FRAMES, WATER METER.**

- Ford Rams Horn—Ford Meter Box Co., Wabash, Ind.

**FRICTION CLUTCHES.**

(See "Clutches, Friction.")

**FRICTIONS, FIBRE.**

- Rockwood—Rockwood Mfg. Co., Indianapolis, Ind.  
 Rogers Fibre Co., Boston, Mass.

**FROES, COOPER.**

- Klein-Logan Co., Pittsburgh, Pa.

**FROGS, WRECKING.**

- Alexander—The Alexander Car Replacer Co., Scranton, Pa.

**FRONTS, BOILER.**

- Banner Iron Works, St. Louis, Mo.  
 Budd Grate Co., Philadelphia, Pa.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 English Iron Works Co., The, Kansas City, Mo.  
 Ferguson & Lange Foundry Co., Chicago, Ill.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 Hartley Boiler Works, Montgomery, Ala.  
 Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 H. S. G.—Houston, Stanwood & Gamble Co., Cincinnati, O.  
 Kelly Foundry & Machine Co., Goshen, Ind.  
 Lamprey Co., The, Westfield, Mass. (for boiler doors.)  
 McNaul Boiler Mfg. Co., Toledo, O.  
 Thatcher—Thacher Propeller & Foundry Corp., Albany, N. Y.  
 Toronto Foundry & Machine Co., Inc., Toronto, O.  
 Treadwell Engineering Co., New York, N. Y.  
 Washburn & Grange, Inc., New York.  
 Wildman Boiler Works, Chicago, Ill.

**FRONTS, FURNACE & KILN.**

- A. C. Co.—Arnold-Creager Co., The, New London, Ohio.

**FUNNELS, CAROLINE.**

- Aldrich Mfg. Co., Buffalo, N. Y.  
 Dover Stamping & Mfg. Co., Cambridge, Mass.  
 Fibrotta—Cordley & Hayes, New York.  
 National Marine Lamp Co., Forestville, Conn.

**FURNACES, ANGLE HEATING.**

- Hauck Mfg. Co., Brooklyn, N. Y.  
 Quigley Furnace & Fdy. Co., New York, N. Y.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, ANNEALING AND TEMPERING.**

(See also "Furnaces, Gas.")

- American Gas Furnace Co., Elizabeth, N. J.  
 American Stoker Co., New York.  
 Anthony Co., The, Long Island City, N. Y.  
 Baush—Baush Machine Tool Co., Springfield, Mass.  
 Beach-Russ Co., Brooklyn, N. Y.  
 ♦ Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.  
 Best, W. N., New York, N. Y.  
 Billow—National Supply Co., Chicago, Ill.  
 Brown Instrument Co., Philadelphia, Pa.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Eclipse Fuel Engineering Co., Rockford, Ill.  
 Gautt—Allison & Company, Chester, Pa.  
 Gilbert & Baker Mfg. Co., Springfield, Mass.  
 Hagan, Geo. J., Co., Pittsburgh, Pa.  
 Holcroft & Co., Detroit, Mich.  
 Hones, Charles A., Inc., Baldwin, Long Island, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Johnson—Johnson Gas Appliance Co., Cedar Rapids, Iowa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Macleod Co., The, Cincinnati, O.  
 Mahr Mfg. Co., Minneapolis, Minn.  
 McClure, G. W., & Son, Pittsburgh, Pa.  
 Metals Production Equipment Co., New York, N. Y.  
 Monarch Engineering & Mfg. Co., The, Baltimore, Md.  
 Morgan Construction Co., Worcester, Mass.  
 National Gas Furnace Co., Providence, R. I.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 Ryan, F. J., & Co., Philadelphia, Pa.  
 S. C. & H.—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Scott—C. U. Scott & Son, Rock Island, Ill.  
 Smallwood—American Incandescent Heat Co., Inc., Boston, Mass.  
 Standard—Standard Fuel Engineering Co., Detroit, Mich.  
 ♦ Stewart—Chicago Flexible Shaft Co., Chicago.  
 Swindell, Wm., & Bros., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Triad—W. R. Bennett Co., Elmwood, Conn.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, BLAST.**

- American Gas Furnace Co., New York.  
 Anthony Co., The, Long Island City, N. Y.  
 Billow—National Supply Co., Chicago, Ill.  
 Canton Boiler & Engine Co., Canton, O.  
 Central Boiler, Tank & Plate Iron Works, Millvale, Pa.  
 Coultas—Searing & Coultas, Pittsburgh, Pa.  
 Enterprise Boiler Co., Youngstown, O.  
 Hamler Boiler & Truck Co., Chicago, Ill.  
 Hartman Co., Philadelphia, Pa.  
 Hausfeld—Campbell-Hausfeld Co., The, Harrison, Ohio.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kennedy, Julian, Pittsburgh, Pa.  
 Kennedy, Walter, Pittsburgh, Pa.  
 Ladd & Baker, Philadelphia, Pa.  
 Lake Erie Engineering Works, Buffalo, N. Y.  
 Mahr, John, & Sons, Chicago, Ill.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 McKee, Arthur G., Cleveland, O.  
 McClure, Son & Co., G. W., Pittsburgh, Pa.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Miner & Peck Mfg. Co., New Haven, Conn.  
 Morgan Engineering Co., Alliance, O.  
 Muskegon Boiler Works, Muskegon, Mich.  
 Pennsylvania Engineering Works, New Castle, Pa.  
 Pittsburgh Valve, Foundry & Const. Co., Pittsburgh, Pa.  
 Ritter-Conley Co., Pittsburgh, Pa.  
 Smythe Co., S. R., Pittsburgh, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Swindell & Bros, Wm., Pittsburgh, Pa.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Treadwell Construction Co., Midland, Pa.  
 Wellman-Seaver-Morgan Co., Cleveland, O.

**FURNACES, BOILER, SMOKELESS.**

(See also "Stokers, Mechanical.")

- Brightman Furnace Co., Cleveland, O.  
 Burke's—Burke Furnace Co., Chicago, Ill.  
 Climax Smoke Preventer Co., Boston, Mass.  
 Detroit Underfeed, Detroit "V" Type—Detroit Stoker Co., Detroit, Mich.  
 Down Draft—Chicago Down Draft Furnace Co., Chicago, Ill.



**Economy Furnace—Economy Sales Co., Inc., Chicago, Ill.**

Hagan, Geo. J., Pittsburg, Pa.  
 Foltz—Foltz Smokeless Furnace Co., Chicago, Ill.  
 Harris—Harris Smokeless Furnace Co., Nashville, Tenn.  
 Harrisburg Fdy. & Mach. Wks., Harrisburg, Pa.  
 Hawley—Hawley Down Draft Furnace Co., Easton, Pa.  
 Hawley-O'Brien—John O'Brien Boiler Works, St. Louis, Mo.  
 Herbert—The Herbert Boiler Co., Chicago, Ill.  
 Hotchkiss—Hotchkiss Engineering Corp., Memphis, Tenn.  
 Improved Chicago Hawley—Chicago Down Draft Furnace Co., Chicago, Ill.  
 McKenzie Furnace Co., Chicago.  
 McMillan—James McMillan & Co., Chicago, Ill.  
 Model—Automatic Furnace Co., Dayton, O.  
 Nashville Bridge Co., The, Nashville, Tenn.  
 O'Brien Hawley—John O'Brien Boiler Works Co., St. Louis, Mo.  
 Quinn & Co., Cincinnati, O.  
 Twin Fire Furnace Co., Chicago, Ill.  
 Washburn & Granger, Inc., New York, N. Y.  
 Wilkinson—Roach Stoker Co., Philadelphia, Pa.

**FURNACES AND FORGES, BRASING.**

American Gas Furnace Co., Elizabeth, N. J.  
 Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.  
 Bernz, Otto, Newark, N. J.  
 Billow—National Supply Co., Chicago, Ill.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Hauck Mfg. Co., Brooklyn, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Metals Production Equipment Co., New York.  
 Monarch Engineering & Mfg. Co., Baltimore, Md.  
 National Rubber & Specialties Co., Cincinnati, Ohio.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 Scott—C. U. Scott & Son, Rock Island, Ill.  
 ♦ The Turner Brass Wks., Sycamore, Ill.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, FOR CALCINING, ROASTING, ETC.**

U. S.—United States Smelting Furnace Co., Bellevue, Ill.

**FURNACES, CASE HARDENING, LEAD AND CYANIDE HARDENING.**

Anthony Co., The Long Island City, N. Y.  
 American Gas Furnace Co., Elizabeth, N. J.  
 Hauck Mfg. Co., Brooklyn, N. Y.  
 Hones, Charles A., Inc., Baldwin, Long Island, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 S. C. & H.—Strong, Carlisle & Hammond Co., Cleveland, O.  
 ♦ Stewart—Chicago Flexible Shaft Co., Chicago, Ill.  
 Standard—Standard Fuel Engineering Co., Detroit, Mich.  
 Tate, Jones & Co., The, Inc., Pittsburgh, Pa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, CYLINDRICAL.**

American Gas Furnace Co., Elizabeth, N. J.

**FURNACES, ELECTRIC, ANNEALING AND TEMPERING.**

American Electric Furnace Co., New York.  
 American Electric Process Steel Co., Boston, Mass.  
 Anthony Co., The, Long Island City, N. Y.  
 Booth—Booth Electric Furnace Co., Chicago, Ill.  
 Bristol Co., The, Waterbury, Conn.  
 Chicago Flexible Shaft Co., Chicago, Ill.  
 Eaton—Modern Equipment Co., Taunton, Mass.  
 Electric Furnace Co., Alliance, O.  
 Engelhard, Charles, New York.  
 General Electric Co., Schenectady, N. Y.  
 Gronwall—John A. Crowley Co., New York.  
 Hagan, Geo. J., Co., Pittsburgh, Pa.  
 Hoskins—Hoskins Mfg. Co., Detroit, Mich.  
 Hughes Electric Heater Co., Chicago, Ill.  
 Hump Method—Leeds & Northrup Co., Philadelphia, Pa.  
 Industrial Electric Furnace Co., Chicago, Ill.  
 Ludlum—Ludlum Electric Furnace Corp., Watervliet, N. Y.  
 Mirco Fuel Oil Equipment Co., Lancaster, Pa.  
 Modern Equipment Co., Taunton, Mass.  
 Moore Dapid Lectromelt—Pittsburgh Electric Furnace Corp., Pittsburgh, Pa.  
 Pyroelectric Instrument Co., Trenton, N. J.  
 Rennerfelt—Hamilton & Hansell, New York, N. Y.  
 Rockwell—W. S. Rockwell Co., New York (annealing and tempering).  
 Ryan—Lancaster Iron Works, Lancaster, Pa.  
 Snyder—Snyder Electric Furnace Co., Chicago, Ill.  
 Wile—Wile Electric Furnace Co., Pittsburgh, Pa.

**FURNACES, ENAMELING.**

American Gas Furnace Co., New York.  
 ♦ Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.  
 Billow—National Supply Co., Chicago, Ill.  
 Macleod & Co., Walter, Cincinnati, O.  
 Metals Production Equipment Co., New York.  
 Quigley Furnace & Fdy. Co., New York, N. Y.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 ♦ Stewart—Chicago Flexible Shaft Co., Chicago, Ill.  
 Tate, Jones & Co., Pittsburgh, Pa.  
 U. S.—United States Smelting Furnace Co., Bellevue, Ill.

**FURNACES, FORGING.**

Anthony Co., The, Long Island City, N. Y.  
 American Stoker Co., New York, N. Y.  
 Baush—Baush Machine Tool Co., Springfield, Mass.  
 ♦ Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.  
 Billow—National Supply Co., Chicago, Ill.  
 Buckeye—Macleod Co., The, Cincinnati, O.  
 Buffalo Forge Co., Buffalo, N. Y. (portable coal)  
 Improved Appliance Co., Brooklyn, N. Y.  
 Metals Production Equipment Co., New York.  
 Monarch Engine & Mfg. Co., Baltimore, Md.  
 Rockwell, W. S., Co., New York, N. Y.  
 Ryan, F. J. & Co., Philadelphia, Pa.  
 S. C. & H.—Strong, Carlisle & Hammond Co., Cleveland, O.  
 ♦ Stewart—Chicago Flexible Shaft Co., Chicago, Ill.  
 Tate-Jones & Co., Inc., Pittsburgh, Pa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, FRUIT DRYING.**

Albany Iron Works, Albany, Ore.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Munnsville—Munnsville Plow Co., Munnsville, N. Y.

**FURNACES, GAS AND OIL BURNING.**

(See also "Furnaces, Annealing," and "Furnaces, Forging.")

Abbe Engineering Co., New York, N. Y.  
 American Gas Furnace Co., Elizabeth, N. J.  
 Amsler, Walter O., Pittsburgh, Pa.  
 Anthony—Anthony Co., The, Long Island City, N. Y.  
 Baird—Baird Pneumatic Tool Co., Kansas City, Mo.  
 ♦ Bellevue Industrial Furnace Co., Detroit, Mich.  
 Best, N. W., & Son, New York, N. Y.  
 Billow—National Supply Co., Chicago, Ill.  
 Boomer—The Hess-Snyder Co., Massillon, O.  
 Buckeye Products Co., Cincinnati, O.  
 Buckeye—Macleod Co., The, Cincinnati, O.  
 Buzzer—Charles A. Hones, Inc., Baldwin, Long Island, N. Y.  
 Ecco—Edward Katzenger Co., Chicago, Ill.  
 Foundry—Equipment & Metals Co., Inc., Covington, Ky.  
 Gas Appliance Co., The, Cleveland, O.  
 General Combustion Co., The, Chicago, Ill.  
 Gilbert & Barker—Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Hammel—Hammel Oil Burning Equipment Co., Inc., Providence, R. I.  
 Heat Rite—John E. Mannen Co., Cleveland, O.  
 Henry Bros., Massillon, O.  
 Improved Appliance Co., The, Brooklyn, N. Y.  
 Ingersoll Rand Co., New York, N. Y.  
 Johnson—Johnson Gas Appliance Co., Cedar Rapids, Ia.  
 Kirkwood—Tate, Jones & Co., Pittsburgh.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Leyner, J. Geo., Engineering Works Co., Littleton, Colo.  
 McLain—Carter Furnace Co., Milwaukee, Wis.  
 Mahr—Mahr Mfg. Co., Minneapolis, Minn.  
 Metals Production Equipment Co., New York.  
 Mirco—Lancaster Iron Works, Inc., Lancaster, Pa.  
 Monarch Eng. & Mfg. Co., Baltimore, Md.  
 National Gas Furnace Co., Providence, R. I.  
 Ohio—The Bennett Furnace Co., Cleveland, O.  
 Patric Furnace Co., Springfield, O.  
 Penn—Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 S. C. & H.—Strong, Carlisle & Hammond Co., Cleveland, O.  
 Simplex—Simplex Tool & Supply Co., Boston, Mass.  
 Standard—Standard Fuel Engineering Co., Detroit, Mich.  
 ♦ Stewart—Chicago Flexible Shaft Co., Chicago, Ill.  
 Strong, Carlisle & Hammond Co., Cleveland, O.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.  
 Triad—W. R. Bennett Co., Elmwood, Conn.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**FURNACES, MELTING, LEAD.**

General Electric Co., Schenectady, N. Y.  
 Pollard, Joseph G. Co., Inc., Brooklyn, N. Y.  
 Rockwell—W. S. Rockwell Co., New York.

**FURNACES, METAL MELTING, CRUCIBLE AND OIL BURNING.**

American Gas Furnace Co., Elizabeth, N. J.

**American Saw & Tool Works, Chicago, Ill.**  
**Anthony—Anthony Co., The, Long Island City, N. Y.**  
**Argyle—James B. Clow & Sons, Chicago, Ill.**  
**Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.**  
**Booth Electric Furnace Co., Chicago, Ill.**  
**Best, W. N., Inc., New York**  
**Calorex—Best, W. N., Inc., New York, N. Y.**  
**Biehl Iron Works, Inc., The, Reading, Pa.**  
**Billow—National Supply Co., Chicago, Ill.**  
**Buckeye Products Co., Cincinnati, O.**  
**Buckeye—Macleod Co., The, Cincinnati, O.**  
**Buzzer—Charles A. Hones, Inc., Baldwin, Long Island, N. Y.**  
**Campbell—Hausfeld Co., Harrison, O.**  
**Coleman—Foundry Equipment Co., Cleveland, O.**  
**Central Foundry Supply Co., Columbus, O.**  
**Clifton-Pratt Co., Cincinnati, Ohio.**  
**Clow Improved—James B. Clow & Sons, Chicago, Ill.**  
**Davis Machine Tool Co., Inc., Rochester, N. Y.**  
**Eclipse—Eclipse Fuel Engineering Co., Rockford, Ill.**  
**Economic—A. P. Smith Mfg. Co., East Orange, N. J.**  
**Focht, Geo., Sons, Hoboken, N. J.**  
**Hauck Mfg. Co., Brooklyn, N. Y.**  
**Hausfeld—Campbell Hausfeld Co., The, Harrison, O.**  
**Holcroft & Co., Detroit, Mich.**  
**Hoskins Mfg. Co., Detroit, Mich.**  
**Improved Appliance Co., Brooklyn, N. Y.**  
**Johnson—Johnson Gas Appliance Co., Cedar Rapids, Iowa.**  
**Koven, L. O., & Bro., Jersey City, N. J.**  
**Laughlin, Alex., & Co., Pittsburgh, Pa.**  
**Littleford Bros., Cincinnati, O.**  
**McLain-Carter Furnace Co., Milwaukee, Wis.**  
**Mahr Mfg. Co., Minneapolis, Minn.**  
**Metals Production Equipment Co., New York.**  
**Monarch Rockwell, Steele-Harvey—Monarch Engineering & Mfg. Co., The, Baltimore, Md.**  
**Mires—Mires Fuel Oil Equipment Co., Inc., Norfolk, Va.**  
**Mueller Mfg. Co., H., Decatur, Ill.**  
**Neway—Rowell Mfg. Co., Appleton, Wis.**  
**Obermayer, S., Co., The, Cincinnati, Ohio.**  
**Patterson—Brown & Patterson, Brooklyn, N. Y.**  
**Paxson Co., J. W., Philadelphia, Pa.**  
**Phillips, Doup and Co., Inc., Brooklyn, N. Y.**  
**Pollard—Joseph G. Pollard, Brooklyn, N. Y.**  
**Quick Meal Stove Co., Division, St. Louis, Mo.**  
**Rockwell, W. S., Co., New York, N. Y.**  
**S. C. & H.—Strong, Carlisle & Hammond Co., Cleveland, O.**  
**Schwartz—Hawley Down Draft Furnace Co., Easton, Pa.**  
**Sperry, D. R. & Co., Batavia, Ill.**  
**Scott, C. U., Davenport, Ia.**  
**Standard—Standard Fuel Engineering Co., Detroit, Mich.**  
**Stewart—Chicago Flexible Shaft Co., Chicago, Ill.**  
**Turner Brass Works, The, Sycamore, Ill.**  
**U. S.—U. S. Smelting Furnace Co., Belleville, Ill.**  
**Whiting Foundry & Equipment Co., Harvey, Ill.**  
**Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.**

#### FURNACES, PAVING TOOL.

**Phisto—Chausse Mfg. Co., Highland Park, Mich.**

#### FURNACES OR FORGES, RIVET AND BOLT HEATING.

**American Gas Furnace Co., Elizabeth, N. J.**  
**Anthony—Anthony Co., The, Long Island City, N. Y.**  
**Beach-Russ Co., New York, N. Y.**  
**Bellevue—Bellevue Industrial Furnace Co., Detroit, Mich.**  
**Billow—National Supply Co., Chicago, Ill.**  
**Buckeye—The Macleod Co., Cincinnati, O.**  
**Buffalo Forge Co., Buffalo, N. Y.**  
**Chicago Flexible Shaft Co., Chicago, Ill.**  
**Eclipse—Eclipse Fuel Engineering Co., Rockford, Ill.**  
**Eclipse—Monarch Engineering & Mfg. Co., The, Baltimore, Md.**  
**General Electric Co., Schenectady, N. Y.**  
**Improved Appliance Co., Brooklyn, N. Y.**  
**Koven, L. O., & Bro., Jersey City, N. J.**  
**Mahr—Mahr Mfg. Co., Minneapolis, Minn.**  
**McLeod & Co., Walter, Cincinnati, O.**  
**Metals Production Equipment Co., New York.**  
**Rockwell, W. S., Co., New York, N. Y.**  
**Ryan, F. J. & Co., Philadelphia, Pa.**  
**Ryerson, Joseph T. & Son, Chicago, Ill.**  
**S. C. & H.—Strong, Carlisle & Hammond Co., Cleveland, O.**  
**Selas—The Selas Co., Philadelphia, Pa.**  
**Standard Fuel Engineering Co., Detroit, Mich.**  
**Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.**

#### FURNACES, REVERBERATORY.

**Monarch Engineering & Mfg. Co., Baltimore, Md.**  
**Chicago Flexible Shaft Co., Chicago, Ill.**  
**Macleod Co., Cincinnati, O.**  
**Morgan Construction Co., Worcester, Mass.**  
**Rockwell, W. S., Co., New York, N. Y.**

## BUZZER

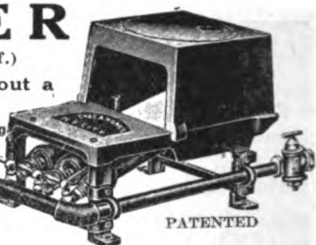
(Reg. U. S. Pat. Off.)

"Hottest Built Without a Blower"

Automatic Blast Gas Soldering Furnaces, Soft Metal Furnaces, Tinning Baths, Burners and Special Appliances.

They create their own blast and are the hottest, most efficient and economical appliances built without a blower. Last a lifetime.

Samples sent for trial. Write today for catalog.



PATENTED

Heats 14 lb. coppers in 5 minutes. For dressing small tools and general shop use.

**CHARLES A. HONES, Inc.**

119 Grand Ave., Baldwin, (Long Island), N. Y.

#### FURNACES, SMELTING.

**Allis-Chalmers Co., Milwaukee, Wis.**  
**Hawley Schwartz—Hawley Down Draft Furnace Co., Easton, Pa.**  
**Improved Appliance Co., Brooklyn, N. Y.**  
**Koven, L. O., & Bro., Jersey City, N. J.**  
**Pennsylvania Engineering Works, New Castle, Pa.**  
**Reeves Bros. Co., Alliance, O.**  
**Rockwell, W. S., Co., New York, N. Y.**  
**Wellman-Seaver-Morgan Co., Cleveland, O.**

#### FURNACES, SOLDERING, FLUMBERS' AND TINNERS'.

(Gas, Gasoline, Kerosene.)

**Always Reliable—Otto Bernz, Newark, N. J.**  
**American Gas Furnace Co., Elizabeth, N. J.**  
**American Saw & Tool Works, Chicago, Ill.**  
**Barthel—Globe Gas Light Co., Boston, Mass.**  
**Beach-Russ Co., New York, N. Y.**  
**Berger Bros. Co., Philadelphia, Pa.**  
**Best—Best Light Co., The, Canton, Ohio.**  
**Boekel & Co., Wm., Philadelphia, Pa.**  
**Bonanza—The Turner Brass Works, Sycamore, Ill.**  
**Bryant—The Bryant Heater & Mfg. Co., Cleveland, O.**  
**Buzzer—Charles A. Hones, Inc., Baldwin, Long Island, N. Y.**  
**Clark Perfection—Clark Cadle Harmon Corp., Rochester, N. Y.**  
**Clayton & Lambert Mfg. Co., Detroit, Mich.**  
**Climax—C. M. Kemp Mfg. Co., Baltimore, Md.**  
**Crane, William M., Co., New York, N. Y.**  
**Cyclone—Double Blast Mfg. Co., N. Chicago, Ill.**  
**Dangler—Dangler Stove Co., Div., Cleveland, O.**  
**Detroit Heating & Lighting Co., Detroit, Mich.**  
**Eclipse Fuel Engineering Co., Rockford, Ill.**  
**Eureka—Clark Novelty Co., Inc., Rochester, N. Y.**  
**Eureka—The Turner Brass Works, Sycamore, Ill.**  
**G. B. G.—Bickelhaupt Skylight Works, New York, N. Y.**  
**Gem—Burgess Soldering Furnace Co., Columbus, O.**  
**General Electric Co., Schenectady, N. Y.**  
**H. J. C.—Haines, Jones & Cadbury Co., Philadelphia, Pa.**  
**Improved Appliance Co., Brooklyn, N. Y.**  
**Johnson—Johnson Gas Appliance Co., Cedar Rapids, Ia.**  
**Wm. Johnson, Newark, N. J.**  
**Lovett—A. E. Lovett & Co., East Orange, N. J.**  
**Odin Stove Mfg. Co., Erie, Pa.**  
**Penn—Pennsylvania Furnace & Stove Co., Warren, Pa.**  
**Phoenix—Decker Mfg. Co., Newark, N. J.**  
**Pioneer—The Turner Brass Works, Sycamore, Ill.**  
**Quick Meal Stove Co., Division, St. Louis, Mo.**  
**Standard—Schellert Mfg. Co., Indianapolis, Ind.**  
**Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.**  
**Red Hot—Ashton Mfg. Co., Newark, N. J.**  
**Smith, A. P. Mfg. Co., East Orange, N. J.**  
**Star—Burgess Soldering Furnace Co., Columbus, O.**  
**Starbuck—R. M. Starbuck & Sons, Hartford, Conn.**  
**Stevens—Stevens Mfg. & Supply Co., Chicago, Ill.**  
**Sun—Sun Vapor & Gas Street Light Co., Canton, O.**  
**Torrid—Geo. W. Diener Mfg. Co., Chicago, Ill.**  
**Turner Hot Blast—The Turner Brass Works, Sycamore, Ill.**  
**Vulcan—Wm. M. Crane Co., New York, N. Y.**  
**Wolverine Brass Works, Grand Rapids, Mich.**  
**Yost—Yost Mfg. Co., Meadville, Pa.**

#### FURNACES, WARM AIR AND HOT WATER COMBINED.

**Atlantic—Portland Stove Foundry Co., Portland, Me.**  
**Boynnton—Boynnton Furnace Co., New York.**  
**Front Rank—Haynes Langeberg Mfg. Co., St. Louis.**  
**Gilt Edge—R. J. Schwab & Sons Co., Milwaukee, Wis.**  
**Magee—Magee Furnace Co., Inc., Boston, Mass.**  
**Mueller—L. J. Mueller Furnace Co., Milwaukee, Wis.**  
**Pease-Economy—International Heater Co., Utica, N. Y.**

Penn—Mt. Penn Stove Works, Reading, Pa.  
 Perfect—Richardson & Boynton Co., New York.  
 Quaker—Quaker Mfg. Co., Chicago  
 Stamford Foundry Co., Stamford, Conn.

### FURNACES, WARM AIR AND STEAM COMBINED.

Denslow—Denslow Heating Co., Waverly, N. Y.  
 Economy—International Heater Co., Utica, N. Y.  
 Mahoney—Mahoney Boiler & Radiator Co., Troy, N. Y.

### FURNACES, WELDING.

American Shop Equipment Co., Chicago, Ill.  
 Amsler, Walter O., Pittsburg, Pa.  
 Beach-Russ Co., Brooklyn, N. Y.  
 Best, W. N., New York.  
 Billow—National Supply Co., Chicago, Ill.  
 Buckeye—MacLeod Co., The, Cincinnati, O.  
 Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Quigley Furnace & Fdy. Co., New York, N. Y.  
 Rockwell, W. S., Co., New York, N. Y.  
 Ryerson, Joseph T. & Son, Chicago, Ill.  
 Tate-Jones & Co., Inc., Pittsburgh, Pa.  
 Toledo Electric Welder Co., Toledo, O.  
 U. S. Gas Furnace Co., Providence, R. I.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

### FURNITURE, DRAFTING ROOM.

Keuffel & Esser Co., Hoboken, N. J.

### FUSES, FOR BLASTING.

Cordeau—Hercules Powder Co., Wilmington, Del.  
 ♦ E. I. Du Pont De Nemours & Co., Wilmington, Del.  
 (Trade names: White and Black, Hemp, Single  
 Tape, Double Tape, Triple Tape, Extra Small Red,  
 Small Red, Planet, Beaver, Charter Oak, Crescent,  
 Anchor, Clover, Reliable, Stag, Blue Label, Comet,  
 Comet Special, Sylvanite, Victor, Bear, Acme,  
 Pacific, Monarch, Shield, Eclipse, Special, Ameri-  
 can Eagle.)  
 Hercules Powder Co., Wilmington, Del.  
 Safety—The Ensign-Bickford Co., Simsbury, Conn.  
 Victor—Atlas Powder Co., Wilmington, Del.

### FUSES, ELECTRICAL, NON-RENEWABLE.

Buss—Bussman Mfg. Co., St. Louis, Mo.  
 Economy—Economy Fuse & Mfg. Co., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.

### FUSES, ELECTRICAL, RENEWABLE.

Buss—Bussman Mfg. Co., St. Louis, Mo.  
 Cote Bros. Mfg. Co., Chicago, Ill.  
 Daum—Daum, A. F., Pittsburgh, Pa.  
 D & W—D & W Fuse Works of General Electric  
 Co., Providence, R. I.  
 Economy—Economy Fuse & Mfg. Co., Chicago.  
 Koo Lee—Cooley Mfg. Co., Inc., New York, N. Y.  
 National—Federal Electric Co., Chicago, Ill.  
 ♦ Noark—Johns-Manville, Inc., New York, N. Y.  
 Noark—Johns-Pratt Co., Hartford, Conn.  
 Trico—M. B. Austin Co., Chicago, Ill.  
 Trico—Trico Fuse Mfg. Co., Milwaukee, Wis.  
 Union—Chicago Fuse Mfg. Co., Chicago, Ill.

### GAGES, ACETYLENE.

U. S.—United States Gauge Co., New York, N. Y.

### GAGES, AIRPLANE.

Federal Gauge Co., Chicago, Ill.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 United States Gauge Co., New York, N. Y.

### GAGES, ALTITUDE.

American—American Steam Gauge & Valve Mfg. Co.,  
 Boston, Mass.  
 Ashton Valve Co., Boston, Mass.  
 Belfield Co., H., Philadelphia, Pa.  
 Bourdon—New England Steam Gauge Co., Niantic,  
 Conn.  
 Capitol—U. S. Radiator Corp., Detroit, Mich.  
 Federal Gauge Co., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Lonergan—Lonergan, J. E., Co., Philadelphia, Pa.  
 Magee—Magee Valve Co., New York, N. Y.  
 Marsh Co., Jas. P., Chicago, Ill.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Penn—Penn Engineering Co., Philadelphia, Pa.  
 Pierce Butler & Pierce Mfg. Corp., New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Triton—U. S. Radiator Corp., Detroit, Mich.  
 United States Gauge Co., New York, N. Y.  
 Union Radiator Co., Johnstown, Pa.  
 Utica Type—New England Steam Gauge Co., Niantic,  
 Conn.

### GAGES, AMMONIA.

American—American Steam Gauge & Valve Mfg. Co.,  
 Boston, Mass.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Bristol's—Bristol Co., The, Waterbury, Conn.  
 Cincinnati Refrigerating Machinery Co., Cincinnati,  
 Ohio.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Edson—The Ashcroft Mfg. Co., New York, N. Y.  
 Ernst Protected Safety—Ernst & Co., Newark, N. J.  
 Federal Gauge Co., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lonergan—Lonergan, J. E., Co., Philadelphia, Pa.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 Nason Mfg. Co., New York, N. Y. (Automatic liquid).  
 National Gauge Co., Brooklyn, N. Y.  
 National—National Steam Specialty Co., Chicago, Ill.  
 Pierce Butler & Pierce Mfg. Corp., New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 United States Gauge Co., New York, N. Y.  
 Watertown—Watertown Specialty Co., Watertown,  
 N. Y.

### GAGES, AMPLIFYING.

North Side Tool Co., Dayton, Ohio.  
 American Gauge Co., The, Dayton, Ohio.

### GAGES, AUTOMOBILE.

American—American Steam Gauge & Valve Mfg. Co.,  
 Boston, Mass.  
 Edelman & Co., E., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Improved Gauge Mfg. Co., Syracuse, N. Y.  
 Lipman Mfg. Co., Beloit, Wis.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 National—National Steam Specialty Co., Chicago, Ill.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Pierce Butler & Pierce Mfg. Corp., New York.  
 United States Gauge Co., New York, N. Y.

### GAGES, BACK, FOR BAND SAW.

Champion—A. E. White Machine Works, Eau Claire,  
 Wis.

### GAGES, BIT.

Bonney Vise & Tool Co., Allentown, Pa.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Millers Falls Co., New York, N. Y.  
 Stanley Rule & Level Co., New Britain, Conn.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 Syracuse Twist Drill Co., Syracuse, N. Y.

### GAGES, BLAST.

Pneumercator Co., Inc., New York, N. Y.

### GAGES, BRAKE PRESSURE.

Marsh & Co., Jas. P., Chicago, Ill.  
 United States Gauge Co., New York, N. Y.  
 Westinghouse—Westinghouse Traction Brake Co.,  
 Pittsburgh, Pa.

### GAGES, BUTTON.

Starrett Co., The L. S., Athol, Mass.

### GAGES, BUTT, FOR HANGING DOORS.

Handy—Dikeman Mfg. Co., The, So. Norwalk, Conn.  
 Stearns, E. C. & Co., Syracuse, N. Y.

### GAGES, CALIFER.

Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Williams, J. H., & Co., Brooklyn, N. Y.

### GAGES, CAR BUILDERS.

Pratt & Whitney Co., Hartford, Conn.

### GAGES, CAR HEATING, STEAM.

United States Gauge Co., New York, N. Y.

### GAGES, CENTER.

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Starrett, L. S., Co., Athol, Mass.  
 Syracuse Sander Mfg. Co., Syracuse, N. Y.  
 Union Tool Co., Orange, Mass.

### GAGES, CHAMFERER.

Bullock Mfg. Associates, Springfield, Mass.

### GAGES, CHEMICAL.

♦ American Steam Gauge & Valve Mfg. Co., Boston.  
 Ashton Valve Co., Boston, Mass.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Federal Gauge Co., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 United States Gauge Co., New York, N. Y.

**GAGES, CIRCUMFERENCE.**

Starrett Co., The L. S., Athol, Mass.

**GAGES, COMPOUND.**

Federal Gauge Co., Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lonerger—Lonerger, J. E., Co., Philadelphia, Pa.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.

**GAGES, CLAPBOARD.**

Smith, Otis A., Rockfall, Conn.  
 Stearns—E. C. Stearns & Co., Syracuse, N. Y.

**GAGES, COMPRESSOMETER, AUTOMOBILE.**

U. S. Standard—United States Gauge Co., New York.

**GAGES, CRANK CASE.**

American Lubricator Co., Detroit, Mich.  
 National Gauge & Equipment Co., La Crosse, Wis.

**GAGES, CYLINDRICAL, PLUG AND RING.**

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.

**GAGES, DEPTH.**

Goodell-Pratt Co., Greenfield, Mass.  
 Slocumb—J. T. Slocumb Co., Providence, R. I.  
 Starrett Co., The L. S., Athol, Mass.  
 Union Tool Co., Orange, Mass.  
 Welch, T. F., & Co., Boston, Mass.

**GAGES, DIFFERENTIAL PRESSURE.**

Bristol Company, The, Waterbury, Conn.

**GAGES, DRAFT.**

American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Bacharach Industrial Instrument Co., Pittsburgh, Pa.  
 Bristol's—The Bristol Co., Waterbury, Conn. (recording).  
 Brown Instrument Co., Philadelphia, Pa.  
 Defender—Defender Automatic Regulator Co., St. Louis, Mo.  
 Ellison—Lewis M. Ellison, Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Hays—The Jos. W. Hays Corp., Michigan City, Ind.  
 Huyette, Paul B. Co., Inc., The, Philadelphia, Pa.  
 Hydro—Bacharach Industrial Instrument Co., Pittsburgh, Pa.  
 Lavigne—Commonwealth Brass Corp., Detroit, Mich.  
 National Gauge Co., Brooklyn, N. Y.  
 Moeller, A. E., Brooklyn, N. Y.  
 Pneumercator—Pneumercator Co., Inc., New York.  
 Precision—Precision Instrument Co., Newark, N. J.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Red Line—Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Taylor Instrument Co., Rochester, N. Y.  
 Vulcan—Vulcan Fuel Economy Co., Chicago, Ill.  
 Westover—American Safety Lamp & Mine Supply Co., Scranton, Pa.

**GAGES, DUPLEX PRESSURE.**

Ashcroft—Ashcroft Mfg. Co., New York, N. Y.  
 Ashton Valve Co., Boston, Mass.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Marsh, Jas. P., Co., Chicago, Ill.  
 United States Gauge Co., New York, N. Y.

**GAGES, DYNAMO.**

Emmex Brass Corp., Detroit, Mich.

**GAGES, EXPANSION TANK.**

(See also "Gages, Water Column")

♦ Meltue & Roberts Co., The, Detroit, Mich.

**GAGES, FARM OR TRACTION ENGINE.**

♦ American Improved—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Ashton Valve Co., Boston, Mass.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lonerger—Lonerger, J. E., Co., Philadelphia, Pa.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 United States Gauge Co., New York, N. Y.

**GAGES, FEELER.**

Starrett Co., The L. S., Athol, Mass.

**GAGES, FIXED CALIPER.**

Rogers, John W., Works, Inc., Gloucester City, N. J.

**GAGES, GAS INSPECTORS'.**

Ashcroft Mfg. Co., New York, N. Y.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Marsh, Jas. P., Co., Chicago, Ill.  
 Starrett Co., The L. S., Athol, Mass.  
 United States Gauge Co., New York, N. Y.

**GAGES, GASOLINE, LIGHTING.**

Kellumeter—Commonwealth Brass Corp., Detroit, Mich.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 U. S. Standard—United States Gauge Co., New York, N. Y.

**GAGES, KNIGHT.**

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Slocumb—J. T. Slocumb Co., Providence, R. I.  
 Starrett Co., The L. S., Athol, Mass.

**GAGES, KUB.**

Starrett Co., The L. S., Athol, Mass.

**GAGES, HYDRAULIC PRESSURE.**

♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Bristol's—Bristol Co., The, Waterbury, Conn.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Ernst Protected Safety—Ernst & Co., Newark, N. J.  
 Federal Gauge Co., The, Chicago, Ill.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lonerger—Lonerger, J. E., Co., Philadelphia, Pa.  
 Magee—The Magee Valve Co., New York.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 National Gauge Co., Brooklyn, N. Y.  
 National—National Steam Specialty Co., Chicago, Ill.  
 Pierce Butler & Pierce Mfg. Corp., New York.  
 R. Dudgeon—Richard Dudgeon, New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 United States Gauge Co., New York, N. Y. (brass jacketed.)

**GAGES, HYDROSTATIC, RECORDING AND INDICATING.**

Krasberg Engineering & Mfg. Corp., Chicago, Ill.

**GAGES, INSIDE CALIPER.**

Sawyer—Sawyer Tool Mfg. Co., Pittsburgh, Mass.  
 Starrett Co., The L. S., Athol, Mass.  
 Taylor-Shantz Co., Rochester, N. Y.

**GAGES, LENGTH.**

Krasberg Engineering & Mfg. Corp., Chicago, Ill.

**GAGES, LIMIT.**

Advance Tool Co., Cincinnati, O.  
 American—American Gauge Co., Newark, N. J.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 ♦ Johansson—C. E. Johansson, Inc., Poughkeepsie, N. Y.  
 ♦ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Pratt & Whitney Co., Hartford, Conn.  
 Syracuse—Lowry-Knise Tool Co., The, Syracuse, N. Y.  
 Williams, J. H., & Co., Brooklyn, N. Y.

**GAGES, LIQUID LEVEL RECORDING.**

Bristol Company, The, Waterbury, Conn.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lunkenheimer Co., The, Cincinnati, O.

**GAGES, LOCATION.**

Krasberg Engineering & Mfg. Corp., Chicago, Ill.

**GAGES, LOCOMOTIVE AND INTERURBAN CAR.**

Ashcroft Mfg. Co., The, New York.  
 Federal Gauge Co., Chicago, Ill.  
 United States Gauge Co., New York, N. Y.

**GAGES, LOSS OF HEAD AND RATE OF FLOW.**

Simplex—Simplex Valve & Meter Co., Philadelphia, Pa.

**GAGES, LUMBER.**

Filler & Stowell Co., Milwaukee, Wis.  
 ♦ Lufkin Rule Co., The, Saginaw, Mich.

**GAGES, MARKING.**

C. S. Co.—Chapin-Stephens Co., Pine Meadow, Conn.  
 ♦ Diaston & Sons Co., Henry, Philadelphia, Pa.  
 Johnson's—E. P. Johnson Rule Mfg. Co., Chicago, Ill.  
 ♦ Stanley Rule & Level Co., New Britain, Conn.  
 Stearns, E. C., & Co., Syracuse, N. Y.

**GAGES, MERCURY AND SIPHON.**

A. B. H.—J. Tagliabue Mfg. Co., New York, N. Y.  
 Adsc—American District Steam Co., N. Tonawanda, N. Y.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Clark—H. W. Clark Co., Mattoon, Ill.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Farnan—Farnan Brass Works, Cleveland, O. (test).  
 Feather Mercury Gauge Mfg. Co., Bloomfield, N. J.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Knapp Mfg. Co., The, New York, N. Y.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 M. M. Gauge Co., Chicago, Ill.  
 National Gauge Co., Brooklyn, N. Y.  
 Parks Engineering Co., Philadelphia, Pa.  
 Precision Instrument Co., Detroit, Mich.  
 Rado Co., The, Milwaukee, Wis.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Shaw's—Quimby Engineering Co., Philadelphia, Pa.  
 Shaw's—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Taylor Instrument Co., Rochester, N. Y.

**GAGES, MICROMETER, CALIPER.**

Ames & Co., B. C., Waltham, Mass.  
 Athol Machine Co., Athol, Mass.  
 ♦ Brown & Sharp Mfg. Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Haines—Haines Gauge Co., The, Philadelphia, Pa.  
 ♦ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Prestometer—Coats Machine Tool Co., Inc., New York, N. Y. (liquid principle)  
 Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Slocumb—J. T. Slocumb Co., Providence, R. I.  
 Starrett Co., The L. S., Athol, Mass.

**GAGES, MINE WATER.**

Everhart Brass Works, Scranton, Pa.

**GAGES, MULTIPLE DRAFT.**

Precision Instrument Co., Newark, N. J.

**GAGES, NON-FREEZING AND NON-VIBRATING.**

United States Gauge Co., New York, N. Y.

**GAGES, OIL LEVEL, FOR DYNAMOS.**

♦ Michigan Lubricator Co., Detroit, Mich.

**GAGES, OIL & GASOLINE TANK.**

Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**GAGES, OIL, SIGHT FEED.**

American—American Lubricator Co., Detroit, Mich.  
 ♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Billow—National Supply Co., Chicago.  
 Cochran Dash—Reeves Automobile Specialty Co., Dallas, Tex.  
 Essex Brass Corp., Detroit, Mich.  
 Hall Mfg. Co., New York, N. Y.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Lunkenheimer Co., Cincinnati, O.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 ♦ Michigan—Michigan Lubricator Co., Detroit, Mich.  
 National Brass Mfg. Co., Rochester, N. Y.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Pierce Butler & Pierce Mfg. Corp., New York.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y.  
 ♦ Triplex—The Lunkenheimer Co., Cincinnati, O.  
 United States Gauge Co., New York, N. Y.  
 ♦ Williams, D. T., Valve Co., The, Cincinnati, O.

**GAGES, OUNCE, GRADUATED.**

Marsh & Co., Jas. P., Chicago, Ill.

**GAGES, OVERFLOW.**

Dayton—McCormick Mfg. Co., Dayton, O.  
 Hancock Mfg. Co., Charlotte, Mich.  
 Northern Tool Co., The, Utica, N. Y.

**GAGES, OXYGEN AND ACETYLENE.**


National Gauge & Equipment Co., La Crosse, Wis.  
 Torchwell—Torchwell Equipment Co., Chicago, Ill.  
 United States Gauge Co., New York, N. Y.

**GAGES, PAPER.**


Starrett Co., The L. S., Athol, Mass.

**GAGES, PLASTER.**


Starrett Co., L. S., Athol, Mass.  
 Stearns & Co., E. C., Syracuse, N. Y.




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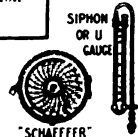
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**GAGES, FLUG.**

Advance Tool Co., Cincinnati, O.  
 Bath, John & Co., Inc., Worcester, Mass.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 Clough, R. M., Tolland, Conn.  
 Gardam & Son, Wm., Inc., New York, N. Y.  
 Harris—Harris Engineering Co., Bridgeport, Conn.  
 Krassberg Mfg. Co., Chicago, Ill.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 National Tool Co., Inc., New York.  
 Pratt & Whitney Co., Hartford, Conn.  
 Syracuse—Lowry-Knise Tool Co., Syracuse, N. Y.  
 Taft-Pierce Mfg. Co., Woonsocket, R. I.  
 Trilock—Pratt & Whitney Co., Hartford, Conn.

**GAGES, PRESSURE, AIR, GAS, OIL, STEAM AND WATER.**

♦ American Improved—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft—The Ashcroft Mfg. Co., Chicago, Ill.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Bernz, Otto Co., Newark, N. J.  
 Belfield, H., Co., Philadelphia, Pa.  
 Boston Steam Specialty Co., Boston, Mass.  
 Bristol's — Bristol Co., The, Waterbury, Conn. (recording).  
 Brown—Brown Instrument Co., The, Philadelphia, Pa.  
 Brunner-Brunner Mfg. Co., Utica, N. Y.  
 Capitol—U. S. Radiator Corp., Boston, Mass.  
 Capitol—Capitol Brass Works, Detroit, Mich.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Edelman & Co., E., Chicago, Ill.  
 Edson—The Ashcroft Mfg. Co., New York, N. Y.  
 Federal Gauge Co., Chicago, Ill.  
 Foxboro Differential, The, Foxboro Co., Inc., Foxboro, Mass.  
 Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
 H. & M. Type—Taylor Instrument Companies, Rochester, N. Y.  
 Improved Gage Mfg. Co., Syracuse, N. Y.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Loomis—Loomis, A. O., Larimer, Pa.  
 Magee—The Magee Valve Co., New York, N. Y.  
 ♦ McKee & Roberts Co., Detroit, Mich.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 Melvin—Technical Equipment Co., New York (alarm)  
 Mini—Fortney Mfg. Co., Belleville, N. J.  
 National Gauge Co., Brooklyn, N. Y.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Norwall—American Radiator Co., Chicago, Ill.  
 New England Steam Gauge Co., Niantic, Conn.  
 Parks Engineering Co., Philadelphia, Pa.  
 Peerless—Jones Gauge Co., Boston, Mass.  
 Penn—The Penn Engineering Co., Philadelphia, Pa.  
 Pierce, Butler & Pierce Mfg. Corp., New York, N. Y.  
 Precision—Precision Instrument Co., Detroit, Mich.  
 Roberts Brass Mfg. Co., Detroit, Mich.  
 Quick Sight—Technical Equipment Co., New York, N. Y.  
 Sarco—The Sarco Fuel Saving & Engineering Co., New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Triton—U. S. Radiator Corp., Detroit, Mich.  
 U. S. Standard—United States Gauge Co., New York.

**GAGES, PRESSURE, COMPOUND.**

American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Ashton Valve Co., Boston, Mass.  
 Marsh, Jas. P., Co., Chicago, Ill.  
 United States Gauge Co., New York, N. Y.

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**GAGES, PRESSURE, ELECTRICAL ALARM.**

Bristol's—Bristol Co., The, Waterbury, Conn.  
Federal Gauge Co., Chicago, Ill.  
U. S.—United States Gauge Co., New York, N. Y.

**GAGES, PRESSURE, ILLUMINATED DIAL.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashton Valve Co., The, Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Federal Gauge Co., Chicago, Ill.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Marsh & Co., Jas. P., Chicago, Ill.
- National—National Steam Specialty Co., Chicago, Ill.
- Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- ◆ United States Gauge Co., New York, N. Y.

**GAGES, PRESSURE, LOCOMOTIVE.**

- Ashcroft—Ashcroft Mfg. Co., New York, N. Y.
- ◆ American Improved—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Ernst Protected Safety—Ernst & Co., Newark, N. J.
- Federal Gauge Co., Chicago, Ill.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Loneragan—J. E. Loneragan Co., Philadelphia, Pa.
- Marsh & Co., Jas. P., Chicago, Ill.
- ◆ McRae & Roberts Co., The, Detroit, Mich.
- New England Steam Gauge Co., Niantic, Conn.  
(Air brake and steam heat).
- Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- United States Gauge Co., New York, N. Y.

**GAGES, PRESSURE AND VACUUM, INDICATING AND RECORDING.**

- ◆ American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- Ashton Valve Co., The, Boston, Mass.
- Bristol's—Bristol Co., The, Waterbury, Conn.
- Brown Instrument Co., Philadelphia, Pa.
- Columbia—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Crown—Jones Gauge Co., Boston, Mass.
- Defender—Defender Automatic Regulator Co., St. Louis, Mo.
- Edson—The Ashcroft Mfg. Co., New York, N. Y.
- Federal Gauge Co., Chicago, Ill.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Gold—Gold Car Heating & Lighting Co., New York, N. Y.
- Hydro—Bacharach Industrial Instrument Co., Pittsburgh, Pa.
- Koven, L. O., & Bros., Jersey City, N. J.
- ◆ Lunkenheimer Co., Cincinnati, O.
- Marsh & Co., Jas. P., Chicago, Ill.
- ◆ McRae & Roberts Co., The, Detroit, Mich.
- Metropolitan, Columbia—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- National Gauge Co., Brooklyn, N. Y.
- National Gauge & Equipment Co., La Crosse, Wis.
- New England Steam Gauge Co., Niantic, Conn.
- Peerless—Jones Gauge Co., Boston, Mass.
- Pneumercator—Pneumercator Co., Inc., New York, N. Y.
- Precision—Precision Instrument Co., Newark, N. J.
- Precision—McDonough Coal Saving Corporation, Detroit, Mich.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Uehling Instrument Co., New York.
- United States Gauge Co., New York, N. Y.

**GAGES, PRESSURE, RESETTING.**

United States Gauge Co., New York, N. Y.

**GAGES, PROFILE.**

Harris—Harris Engineering Co., Bridgeport, Conn.

**GAGES, PYROMETER.**

Ashcroft Mfg. Co., New York, N. Y.  
Ashton Valve Co., Boston, Mass.

Bristol's—Bristol Co., The, Waterbury, Conn.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Foxboro Co., Inc., The, Foxboro, Mass.  
Marsh & Co., Jas. P., Chicago, Ill.  
National Gauge & Equipment Co., La Crosse, Wis.  
Pierce Butler & Pierce Mfg. Corp., Syracuse, N. Y.  
Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Star Brass Mfg. Co., Boston, Mass.  
United States Gauge Co., New York, N. Y.

**GAGES, RACK, PINION AND GEAR TOOTH.**

Boston Gear Works, Norfolk Downs, Mass.  
Klein—The Logan Co., Pittsburgh, Pa.

**GAGES, RADIUS.**

Krasberg Engineering & Mfg. Corp., Chicago, Ill.  
Moss, Ochs Co., Cleveland, O.  
Starrett Co., The L. S., Athol, Mass.

**GAGES, REFERENCE.**

Johansson—C. E. Johansson, Inc., Poughkeepsie, N. Y.

**GAGES, RETARD.**

U. S.—United States Gauge Co., New York, N. Y.

**GAGES, RING.**

Harris—Harris Engineering Co., Bridgeport, Conn.  
Gardam, Wm. & Son, Inc., New York, N. Y.  
Nelson Tool Co., Inc., New York, N. Y.

**GAGES, ROLLER AND ROLLING MILL.**

Brown & Sharpe Mfg. Co., Providence, R. I.  
Dexter—The Leavitt Machine Co., Orange, Mass.  
Haines Gauge Co., Philadelphia, Pa.

**GAGES, SAW CROSSCUT.**

Baldwin, Tuthill & Bolton, Grand Rapids, Mich.

**GAGES, SCRATCH.**

- ◆ Billings & Spencer Co., The, Hartford, Conn.
- Goodell-Pratt Co., Greenfield, Mass.
- Starrett Co., The L. S., Athol, Mass.
- Welch, T. F., & Co., Boston, Mass.

**GAGES, SCREW FIT OR THREAD.**

- Briggs—The Pratt & Whitney Co., Hartford, Conn.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Goodell-Pratt Co., Greenfield, Mass.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Starrett Co., The L. S., Athol, Mass.

**GAGE AND SIGNAL INSTRUMENT.**

Melvin—Melvin, M. G., & Co., New York.

**GAGES, SNAP.**

- American—American Gauge Co., Newark, N. J.
- ◆ Billings & Spencer Co., The, Hartford, Conn.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- ◆ Gardam, Wm. & Son, Inc., New York, N. Y.
- Harris—Harris Engineering Co., Bridgeport, Conn.
- Knapp, Arthur, Engineering Corp., New York, N. Y.
- Krasberg Mfg. Co., Chicago, Ill.
- Nelson Tool Company, Inc., New York.
- Pratt & Whitney Co., Hartford, Conn.
- Taft-Pierce Mfg. Co., Woonsocket, R. I.

**GAGES, STAIR.**

Starrett Co., The L. S., Athol, Mass.

**GAGES, STANDARD.**

Continental Car Co. of America, Louisville, Ky.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Wilton Master Blocks—Wilton Tool & Mfg. Co., Boston, Mass.

**GAGES, SULPHITE.**

Foxboro Co., Inc., The, Foxboro, Mass.  
Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.

**GAGES, SURFACE.**

- ◆ Billings & Spencer Co., Hartford, Conn.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- Clark—H. W. Clark Co., Mattoon, Ill.
- Goodell-Pratt Co., Greenfield, Mass.
- Hoggson & Pettis Mfg. Co., New Haven, Conn.
- Kirk, W. P., Cincinnati, O.
- Starrett Co., The L. S., Athol, Mass.
- Union Tool Co., Orange, Mass.
- Universal—The Schellenbach-Hunt Tool Co., Cincinnati, O.

**GAGES, SWING SAW, AUTOMATIC.**

Freeport Truck & Clamp Co., Freeport, Mich.  
Tannewitz Works, Grand Rapids, Mich.

**GAGES, TAPER & TELESCOPIING.**

Hartford—Hartford Special Machinery Co., Hartford, Conn.  
Pratt & Whitney Co., Hartford, Conn.  
Starrett Co., The L. S., Athol, Mass.



**GAGES, TENSION, BAND SAW.**  
Armstrong Mfg. Co., Portland, Ore.

**GAGES, TEST.**

(See "Gages, Mercury," and "Gages, Pressure and Vacuum.")

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- Ashton Valve Co., Boston, Mass.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Federal Gauge Co., Chicago, Ill.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Loneragan—J. E. Loneragan Co., Philadelphia, Pa.
- Marsh & Co., Jas. P., Chicago, Ill.
- New England Steam Gauge Co., Niantic, Conn.
- Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Star—Star Brass Mfg. Co., Boston, Mass.
- United States Gauge Co., New York, N. Y.

**GAGES, THICKNESS.**

- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- Moss, Ochs Co., Cleveland, O.
- Starrett Co., The L. S., Athol, Mass.
- Union Tool Co., Orange, Mass.

**GAGES, THREAD.**

- Bicknell-Thomas Co., Greenfield, Mass.
- ◆ Brown, Sharpe Mfg. Co., Providence, R. I.
- Gardam, Wm. & Son, Inc., New York.
- Goddard Tool Co., Chicago, Ill.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass. (plug and ring).
- Knapp, Arthur, Engineering Corp., New York.
- Krasberg Mfg. Co., Chicago, Ill.
- Pratt & Whitney Co., Hartford, Conn.
- Rogers, John M., Works, Inc., Gloucester City, N. J.
- Taft Pierce Mfg. Co., Woonsocket, R. I.
- West & Dodge Co., Boston, Mass.

**GAGES, TIRE, PNEUMATIC.**

- Foxboro Co., Inc., The, Foxboro, Mass.
- Improved Gauge Mfg. Co., Syracuse, N. Y.
- National Gauge & Equipment Co., La Crosse, Wis.
- Schrader Universal—Schrader's Son, A., Inc., Brooklyn, N. Y.
- Stevens—Stevens Mfg. & Supply Co., Chicago, Ill.
- United States Gauge Co., New York, N. Y.

**GAGES, TOLERANCE.**

- Johansson—C. E. Johansson, Inc., Poughkeepsie, N. Y.

**GAGES, TRACK.**

- Buda Co., Chicago, Ill.
- Handlan-Buck Mfg. Co., St. Louis, Mo.
- Huntington—Aldon Company, The, Chicago, Ill.
- Huntington—Irving Mfg. & Tool Co., New York, N. Y.
- Kalamazoo—Kalamazoo Railway Supply Co., Kalamazoo, Mich.
- Leetonia Tool Co., The, Leetonia, O. (mine)
- Verona—Verona Tool Works, Pittsburg, Pa.

**GAGES, TRIPLEX.**

- Ashton Valve Co., Boston, Mass.
- Foxboro Co., Inc., The, Foxboro, Mass.

**GAGES, UEN.**

- Haydenville Co., The, Haydenville, Mass.
- ◆ McRae & Roberts Co., Detroit, Mich.
- Richardson, Edro, Brass Co., Baltimore, Md.

**GAGES, "U" TUBE.**

- Precision Instrument Co., Newark, N. J.

**GAGES, VACUUM, INDICATING AND RECORDING.**

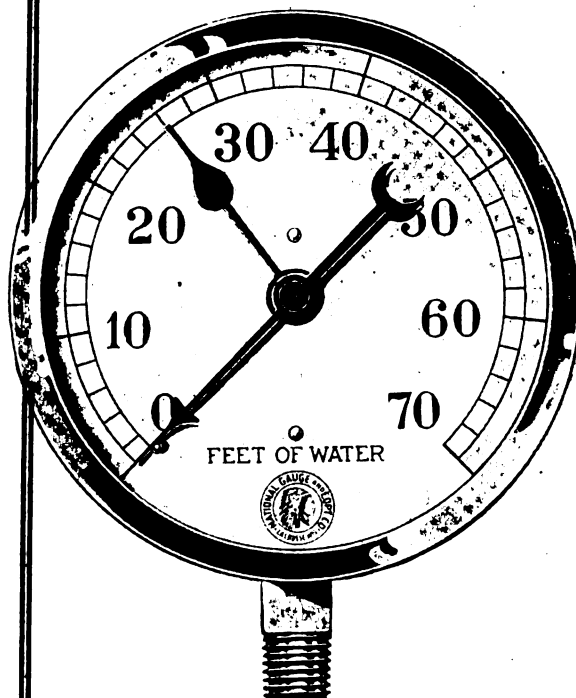
(See also Gages, Pressure, Vacuum, Indicating and Recording.)

- Moeller, A. E., Brooklyn, N. Y.
- National Gauge & Equipment Co., La Crosse, Wis.

**GAGES, WATER COLUMN.**

- Alexander—Marion Machine Foundry & Sup. Co., Marion, Ind.
- ◆ American—American Injector Co., Detroit, Mich.
- American Lubricator Co., Detroit, Mich.
- Ashton—The Ashton Valve Co., Boston, Mass.
- Beaton & Cadwell Mfg. Co., New Britain, Conn.
- Belknap Mfg. Co., The, Bridgeport, Conn.
- Bordo—L. J. Bordo, Philadelphia, Pa.
- Buckeye Iron & Brass Works, Dayton, O.
- Burrows—Burrows Mfg. Co., York, Pa.
- Capitol—Capitol Brass Works, Detroit, Mich.
- The Canton Brass & Machine Co., Canton, O.
- ◆ Chicago—The Ohio Injector Co., Wadsworth, O.

# STEAM AND ALTITUDE GAUGES



No. 46. 4½" Altitude.

National Altitude Gauges are all of the Independent Type. Gauge rings, held with set screws are easily removed for setting red pointers. Gauge socket is fitted with square boss above thread to take wrench. Cases are ground and buffed, copper plated and handsomely finished in black baked enamel.

Standard Packages contain 25 gauges.  
Sample orders solicited.

**National Gauge  
and Equipment Co.**  
La Crosse, Wis.

DETROIT  
NEW YORK



CHICAGO  
SAN FRANCISCO

- Cochrane, J. A., Brass Mfg. Co., Cleveland, Ohio.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Defender Automatic Regulator Co., St. Louis, Mo.  
 Delco—Nathan Mfg. Co., New York, N. Y.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 ♦ **Detroit—Detroit Lubricator Co.**, Detroit, Mich.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Edna Brass Mfg. Co., The Cincinnati, O. (reflex).  
 Eureka—Star Brass Mfg. Co., Boston, Mass.  
 Farnan—Farnan Brass Works, Cleveland, O.  
 Firth—Tranter Mfg. Co., Pittsburg, Pa.  
 Golden—Golden-Anderson Valve Specialty Co., Pittsburg, Pa.  
 Haydenville Co., The Haydenville, Mass.  
 Jerguson—Jerguson Gage & Valve Co., Somerville, Mass.  
 ♦ Kelly & Jones Co., The Greensburg, Pa.  
 Keyser—The Ashcroft Mfg. Co., New York, N. Y.  
 Klinger—Nathan Mfg. Co., New York.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Lunkenhelmer Co., Cincinnati, O. Trade names—Automatic, Plain.  
 ♦ McRae & Roberts Co., The, Detroit, Mich.  
 ♦ Michigan—Michigan Lubricator Co., Detroit, Mich.  
 Milwaukee Flush Valve Co., Milwaukee, Wis.  
 ♦ Navy—Penberthy Injector Co., Detroit, Mich. (automatic and non-automatic).  
 P. B. H.—The Paul B. Huyette Co., Philadelphia, Pa.  
 ♦ Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Pratt & Cady Co., Hartford, Conn.  
 Queen-Gray Co., Philadelphia, Pa.  
 ♦ Roberts Brass Mfg. Co., The, Detroit, Mich.  
 ♦ Safeguard—Penberthy Injector Co., Detroit, Mich. (automatic and non-automatic).  
 ♦ Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 Stulp—Fred J. Stulp, Muskegon, Mich.  
 Swift—The Swift Lubricator Co., Elmira, N. Y.  
 Vanduzen Co., The E. W., Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williams—The Williams Gauge Co., Pittsburg, Pa.

#### GAGES, WATER COLUMN, SAFETY.

- ♦ American—American Injector Co., Detroit, Mich.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Barclay—David Craig, Boston, Mass.  
 Delco—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 "Ernst Nonbreakable" Protected Safety—Ernst & Co., Newark, N. J.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Huyette, Paul B. Co., Inc., The, Philadelphia, Pa.  
 ♦ Jenkins Bros., New York, N. Y.  
 Kelley & Jones Co., The Greensburg, Pa.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Michigan Lubricator Co., Detroit, Mich.  
 ♦ The Northern—Northern Tool Co., Inc., Utica, N. Y.  
 ♦ Penberthy Injector Co., Detroit, Mich.  
 ♦ Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburg, Pa.  
 Pressurelok—Prince-Groff Co., The, New York, N. Y.  
 ♦ Reliance—The Reliance Gauge Column Co., Cleveland, O.  
 Rich Mfg. Co., Boston, Mass.  
 ♦ Safeguard—Penberthy Injector Co., Detroit, Mich.  
 Shallow—Bridgman Bros. Co., Philadelphia, Pa.  
 Stulp, Fred J., Muskegon, Mich.  
 ♦ Swartwout—The Ohio Body and Blower Co., Cleveland, O.  
 Watertown—Watertown Specialty Co., Watertown, N. Y.

#### GAGES, WATER LEVEL RECORDING.

- Bristol's—The Bristol Co., Waterbury, Conn.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Parks, Engineering Co., Philadelphia, Pa.  
 Pittsburgh Gage & Supply Co., Pittsburg, Pa.  
 Quimby Engineering Co., Philadelphia, Pa.

#### GAGES, WATER, QUICK CLOSING.

- P. B. H.—The Paul B. Huyette Co., Inc., Philadelphia, Pa.  
 Nason Mfg. Co., New York, N. Y.

#### GAGES, WATERWORKS.

- ♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft Mfg. Co., New York, N. Y.  
 Bristol's—The Bristol Co., Waterbury, Conn.  
 Clark, H. W., Co., Mattoon, Ill.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Lonergan, J. E., Co., Philadelphia, Pa.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 ♦ National Gauge & Equipment Co., La Crosse, Wis.  
 Pittsburgh Gage & Supply Co., Pittsburg, Pa.  
 ♦ Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Star Brass Mfg. Co., Boston, Mass.  
 United States Gauge Co., New York, N. Y.

#### GAGES, WIRE.

- ♦ Brown & Sharpe Mfg. Co., Providence, R. I.

- ♦ Cleveland Twist Drill Co., Cleveland, O.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 ♦ Peck, Stow & Wilcox Co., Southington, Conn.  
 ♦ Starrett Co., The L. B., Athol, Mass.  
 Wright Wire Co., Palmer, Mass.

#### GALVANIZING.

- Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Cuyler & Mohler, Baltimore, Md.  
 Essex Foundry, Newark, N. J.  
 Finn, John, Metal Works, San Francisco, Calif.  
 Galvanizing Corp. of America, Inc., Brooklyn, N. Y.  
 Globe Machine & Stamping Co., Cleveland, O.  
 Gueder, Paeschke & Frey Co., St. Paul ave. & 15th st., Milwaukee, Wis.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 The Jersey City Galvanizing Co., 112 John st., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Malleable Iron Fittings Co., Branford, Conn.  
 Marine Hardware Equipment Co., South Portland, Me.  
 Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Perkins Marine Lamp Co., Brooklyn, N. Y.  
 Perko—Perkins Marine Lamp Co., Brooklyn, N. Y.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Rockford Bolt Co., Rockford, Ill.  
 Ruemmel Dawley Mfg. Co., St. Louis, Mo.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scalf, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Standard Spiral Pipe Works, Chicago, Ill.  
 U. S. Electro Galvanizing Co., Brooklyn, N. Y.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### GALVANOMETERS FOR TESTING BLASTING CIRCUITS.

- Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont—E. I. Du Pont De Nemours & Co., Wilmington, Del.  
 General Electric Co., Schenectady, N. Y.  
 Hercules Powder Co., Wilmington, Del.

#### GARAGE EQUIPMENT, REPAIR.

- Canedy—Otto Mfg. Co., Chicago Heights, Ill.  
 Continental Auto Parts Co., Columbus, Ind.  
 Stewart—Chicago Flexible Shaft Co., Chicago, Ill.

#### GAS, ACETYLENE, IN CYLINDERS.

- Commercial—Commercial Acetylene Supply Co., Inc., Weston Electrical Instrument Co., Newark, N. J.

New York, N. Y.

- Prest-O-Lite—Prest-O-Lite Co., Inc., Indianapolis, Ind.

#### GAS STOVE AND RADIATOR TIPS.

- American Lava Co., Chattanooga, Tenn.

#### GAS TIPS AND BURNERS.

(See "Burners, Gas.")

- American Lava Co., Inc., Chattanooga, Tenn.

#### GAS WORKS APPARATUS AND MACHINERY.

- Bartlett & Hayward Co., The, Baltimore, Md.  
 Bate & Son, W. T., Conshohocken, Pa.  
 Cruse-Kemper Co., Ambler, Pa.  
 Davis & Farnum Mfg. Co., Waltham, Mass.  
 Gas Machinery Co., The, Cleveland, O.  
 Griscom-Russell Co., New York, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Logan Iron Works, Brooklyn, N. Y.  
 Loomis-Pettibone System—Power & Mining Machinery Co., Cudahy, Wis.  
 Morgan Construction Co., Worcester, Mass.  
 New Process Gas Co., The, Philadelphia, Pa.  
 Quintard Iron Works Co., New York, N. Y.  
 Ritter-Conly Co., Pittsburg, Pa.  
 Western Gas—Western Gas Construction Co., The, Ft. Wayne, Ind.  
 Wile Gas Power Co., Rochester, N. Y.  
 Wood & Co., R. D., Philadelphia, Pa.

#### GASKETS, AIR BRAKE.

- Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 ♦ Boston Belting Corp., Boston, Mass.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 ♦ Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
 Diamond Rubber Co., The, Akron, O.  
 Dominion Asbestos & Rubber Corp., New York.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Goetz Gasket & Packing Co., New Brunswick, N. J.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Lubron Co., The, Everett, Mass.  
 Marsh, Chas. W., Co., Muskegon, Mich.  
 Phoenix Specialty Mfg. Co., New York.  
 Pioneer Rubber Mills, San Francisco, Calif.

**Rockford Leather Washer Co.**, Rockford, Ill.  
**Standard Mfg. & Supply Co.**, Philadelphia, Pa.  
**U. S. Indestructible Gasket Co.**, New York, N. Y.  
**United States Rubber Co.**, Mechanical Goods Div., New York.

**GASKETS, AMMONIA.**

- Akron—Akron Metallic Gasket Co.**, Akron, O.  
**Barwood—The L. J. Barwood Mfg. Co.**, Stoneham, Mass.  
 ♦ **Boston Belting Corp.**, Boston, Mass.  
**Dominion Asbestos & Rubber Corp.**, New York.  
**Flexitallic—Flexitallic Gasket Co.**, Camden, N. J.  
**Goetz Gasket & Packing Co.**, New Brunswick, N. J.  
**Guillott Metal Gasket & Supply Co.**, Chicago, Ill.  
 ♦ **Jenkins 96—Jenkins Bros.**, New York, N. Y.  
**Killingerit—Crane Co.**, Chicago, Ill.  
**McCord Mfg. Co., Inc.**, Wyandotte, Mich.  
**Phoenix Specialty Mfg. Co.**, New York.  
**Quaker City Rubber Co.**, Philadelphia, Pa.  
**Standard Mfg. & Supply Co.**, Philadelphia, Pa.  
**U. S. Indestructible Gasket Co.**, New York, N. Y.  
 ♦ **United States Rubber Co.**, Mechanical Goods Div., New York.  
**Self-Sealing—E. A. Wilcox Mfg. Co.**, Chicago, Ill.

**GASKETS, ASBESTOS-METALLIC.**

- Adams, C. F.**, Ft. Worth, Tex.  
**Akron Metallic Gasket Co.**, Akron, O.  
**Allen Mfg. Co.**, W. D., Chicago, Ill.  
**Armor—Vulcan Asbestos Mfg. Co., Inc.**, New York, N. Y.  
**Asbesteeil—Faul & Timmins**, Buffalo, N. Y.  
**Asbestos Fibre Spinning Co.**, North Wales, Pa.  
**Asbestos Textile Co., Inc.**, New York, N. Y.  
**Asbestos & Rubber Works of America**, New York.  
 ♦ **Belmont Packing & Rubber Co.**, Philadelphia, Pa.  
**Bestallic—The Advance Packing & Supply Co.**, Chicago, Ill.  
 ♦ **B. & P.—New York Belting & Packing Co.**, New York, N. Y.  
**Brunswick, Triumph—Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
 ♦ **Cincinnati Rubber Mfg. Co.**, Cincinnati, O.  
**Clinton—Clinton Mfg. Co.**, Brooklyn, N. Y.  
**Common Sense—Phoenix Specialty Mfg. Co.**, New York, N. Y.  
**Consolidated—Consolidated Packing & Supply Co.**, New York, N. Y.  
**Danubil—The Danubil Co.**, New York, N. Y.  
 ♦ **Double Diamond—New York Belting & Packing Co.**, New York, N. Y.  
**Duraco—United States Asbestos Co. of Illinois**, Chicago, Ill.  
**Eagle—Eagle Packing & Rubber Co., Inc.**, New York.  
**Elkhart Rubber Works**, Elkhart, Ind.  
**Essex—Essex Rubber Co.**, Trenton, N. J.  
**Everlasting—Dexter Supply Co.**, Chicago, Ill.  
**Flexitallic—S. R. Drum Mfg. Co.**, Chicago, Ill.  
**Flexitallic—Flexitallic Gasket Co.**, Philadelphia, Pa.  
**Garlock—The Garlock Packing Co.**, Palmyra, N. Y.  
**Gladialator—New Jersey Asbestos Co.**, New York, N. Y.  
**Goetz Pattern—Niagara Falls Gasket & Packing Co.**, New York, N. Y.  
**Goetze's—Goetze-Gasket & Packing Co.**, New Brunswick, N. Y.  
**Goetzerit—Goetze-Gasket & Packing Co.**, New Brunswick, N. Y.  
**Goodyear Tire & Rubber Co.**, Akron, O.  
**Hart—Hart Packing Co.**, Boston, Mass.  
 ♦ **Ideal—General Asbestos & Rubber Co.**, Charleston, S. C.  
**Indestructible—U. S. Indestructible Gasket Co.**, New York, N. Y. (Goetze type).  
**Iron Clad—Cincinnati Gasket & Packing Co.**, Cincinnati, Ohio.  
**Janos Asbestos Co.**, New York, N. Y.  
**Jenkins—Jenkins Bros.**, New York, N. Y.  
**Johnson's—The Henry Johnson Co.**, Jersey City, N. J.  
 ♦ **Kearsarge—Johns-Manville, Inc.**, New York, N. Y.  
**Keasbey & Mattison Co.**, Ambler, Pa.  
 ♦ **Liberty—Johns-Manville, Inc.**, New York, N. Y.  
**Lubron—The Lubron Co.**, Everett, Mass.  
**McKim—McCord Mfg. Co.**, Detroit, Mich.  
**Metallo—Metallo Gasket Co.**, New Brunswick, N. J. (Corrugated copper inlaid).  
**Mikesell Brothers Co.**, Chicago, Ill.  
 ♦ **Mobilene—Johns-Manville, Inc.**, New York, N. Y.  
**Morgan Mfg. Co., Inc.**, Keene, N. H.  
**Never-Leak—Fitzgerald Mfg. Co.**, The Torrington, Conn.  
**Old Dominion—Dominion Asbestos & Rubber Corp.**, New York.  
**Osborne—Osborne High Pressure Joint & Valve Co.**, Chicago, Ill.  
**Perfection Tire & Rubber Co.**, Wabash, Ind.  
**Pilley's—Pilley Packing & Flue Brush Mfg. Co.**, St. Louis, Mo.  
**Pittsburgh Valve, Fdy. & Construction Co.**, Pittsburg, Pa.  
 ♦ **Rainbeato—United States Rubber Co.**, Mechanical Div., New York.  
**Rebele, L. J.**, New York, N. Y.

- Right—Gasket Supply Co.**, Philadelphia, Pa.  
 ♦ **Semibronze, Garco, Reinforced—General Asbestos & Rubber Co.**, Charleston, S. C.  
**Smooth-On—Smooth-On Mfg. Co.**, Jersey City, N. J.  
 ♦ **Spider—New York Belting & Packing Co.**, New York, N. Y.  
**Squadron—Dominion Asbestos & Rubber Corp.**, New York.  
**Standard Mfg. & Supply Co.**, Philadelphia, Pa.  
**Stanite—Metallo Gasket Co.**, New Brunswick, N. J.  
**Sutherland Leather & Felt Co.**, Detroit, Mich.  
**Triple—Cincinnati Gasket & Packing Co.**, Cincinnati, O.  
**Universal—Schellert Mfg. Co.**, Indianapolis, Ind.  
**U. S. Indestructible Gasket Co.**, New York, N. Y.  
**Victor (copper asbestos)—Victor Mfg. & Gasket Co.**, Chicago, Ill.  
**Watson Co., H. F., Erie, Pa.**  
**Wearwell, Longwear—Wearwell Gasket & Packing Co.**, Camden, N. J.  
**Wilcox Mfg. Co., E. A., Chicago, Ill.**  
**Wilder Mfg. Co.**, St. Louis, Mo.  
**YLD—Wilder Mfg. Co.**, St. Louis, Mo.

**GASKETS, BOILER TUBE.**

- Anchor Packing Co.**, The, Philadelphia, Pa.  
**Asbesteeil—Faul & Timmins**, Buffalo, N. Y.  
**Asbestos Fibre Spinning Co.**, North Wales, Pa.  
 ♦ **Boston Belting Corp.**, Boston, Mass.  
**Canfield—H. O. Canfield Co.**, Bridgeport, Conn.  
**Cincinnati Gasket & Packing Co.**, Cincinnati, O.  
**Diamond Rubber Co., Inc.**, Akron, O.  
**Dominion—Dominion Asbestos & Rubber Corp.**, New York, N. Y.  
**Double Service Packing Co.**, Philadelphia, Pa.  
**Ebonite—Quaker City Rubber Co.**, Philadelphia, Pa.  
**Flexitallic—Flexitallic Gasket Co.**, Camden, N. J.  
 ♦ **General Asbestos & Rubber Co.**, Charleston, S. C.  
**Janos Asbestos Co.**, New York, N. Y.  
 ♦ **Jenkins 96—Jenkins Bros.**, New York, N. Y.  
**McCord Mfg. Co., Inc.**, Wyandotte, Mich.  
**Pioneer Rubber Mills**, San Francisco, Cal.  
**Rebele, L. J.**, New York, N. Y.  
**Standard Mfg. & Supply Co.**, Philadelphia, Pa.  
**U. S. Indestructible Gasket Co.**, New York, N. Y.  
**United Rubber & Gasket Co.**, Trenton, N. J.  
 ♦ **United States Rubber Co.**, Mechanical Goods Div., New York.  
**Wilcox Mfg. Co., E. A., Chicago, Ill.**

**GASKETS, BRASS, BRONZE, COPPER, LEAD, STEEL AND OTHER METALS.**

- ♦ **American District Steam Co.**, N. Tonawanda, N. Y.  
**Akron—Akron Metallic Gasket Co.**, Akron, O.  
**Algo—Auburn Leather Goods Co.**, Auburn, N. Y.  
**Barwood—The L. J. Barwood Mfg. Co.**, Stoneham, Mass.  
**Beaton & Cadwell Mfg. Co.**, New Britain, Conn.  
**Best—Best Co.**, Pittsburgh, Pa.  
**Bethany—Metallo Gasket Co.**, New Brunswick, N. J.  
**Brunswick—Goetze Gasket & Packing Co.**, New Brunswick, N. J. (corrugated with asbestos).  
**Central Metallic Gasket Co.**, Chicago, Ill.  
**Cincinnati Gasket & Packing Co.**, Cincinnati, O.  
**Devo—Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
**Duplex—Akron Metallic Gasket Co.**, Akron, O.  
**Eagle Brand—Taunton-New Bedford Copper Co.**, Taunton, Mass.  
**Everlasting—Dexter Supply Co.**, Chicago, Ill.  
**Faul-Timmins**, Buffalo, N. Y. (Copper flange, corrugated).  
**Guillott Metal Gasket & Supply Co.**, Chicago, Ill.  
**Hussey, C. G. & Co.**, Pittsburg, Pa.  
**Ideal—Mach & Rebele, Inc.**, New York, N. Y.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.  
**Knight, H. W., & Son**, Seneca Falls, N. Y.  
**Liberty Gasket & Mfg. Co.**, Chicago, Ill.  
**Maze Valve Co.**, The, New York, N. Y.  
**McCord Mfg. Co., Inc.**, Wyandotte, Mich.  
**Never-Leak—Fitzgerald Mfg. Co.**, Torrington, Conn.  
**Niagara Falls Gasket & Packing Co.**, New York, N. Y.  
**Oxford—Metallo Gasket Co.**, New Brunswick, N. J.  
**Phoenix Specialty Mfg. Co.**, New York, N. Y.  
**Pneumetallic—U. S. Indestructible Gasket Co.**, New York, N. Y.  
**Right—Gasket Supply Co.**, Philadelphia, Pa.  
**Self-Sealing—E. A. Wilcox Mfg. Co.**, Chicago, Ill.  
**Smooth-On Mfg. Co.**, Jersey City, N. J.  
**Snow—Snow Flexible Gasket Co.**, Chicago, Ill.  
**Standard Mfg. & Supply Co.**, Philadelphia, Pa.  
**Summitt—Akron Metallic Gasket Co.**, Akron, O.  
**Taunton—New Bedford Copper Co.**, Taunton, Mass.  
**Triumph—Goetz Gasket & Packing Co.**, New Brunswick, N. J.  
**United Lead Co.**, New York, N. Y.  
**Universal Gasket & Mfg. Co.**, Chicago, Ill.  
**Vanduzen Co.**, The E. W., Cincinnati, O.  
**Victor—Victor Manufacturing & Gasket Co.**, Chicago, Ill.  
**Windsor Mfg. Co.**, Milwaukee, Wis.

**GASKETS, CLOSET, FLOOR.**

- Canfield, The H. O. Co., Bridgeport, Conn.  
**Canfield Rubber Co., The**, Bridgeport, Conn.  
 Double Service Packing Co., Philadelphia, Pa.  
 Glauber, M. & Co., New York, N. Y.  
 ♦ Goodrich—B. F. Goodrich Co., Akron, O.  
 Phoenix Specialty Mfg. Co., New York.  
 ♦ Republic Rubber Co., The, Youngstown, O.  
 Snow—Snow Flexible Gasket Co., Chicago, Ill.  
 U. S. Indestructible Gasket Co., New York, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**GASKETS, CORK.**

- Acco—Armstrong Cork Co., Pittsburgh, Pa.  
 Advance Felt & Cutting Co., Chicago, Ill.  
 Cincinnati Gasket & Packing Co., Cincinnati, O.  
 Goetz Gasket & Packing Co., New Brunswick, N. J.

**GASKETS, CYLINDER.**

- McCord Mfg. Co., Inc., Wyandotte, Mich.  
 Rockford Leather Washer Co., Rockford, Ill.

**GASKETS, FELT.**

- Advance Felt Cutting Co., Chicago, Ill.  
 Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 Booth—The Booth Felt Co., Worcester, Mass.  
 Brawley, T. R., Brooklyn, N. Y.  
**Fieldco—E. B. Field & Co.**, Worcester, Mass.  
 Lyons Felt Co., Brooklyn, N. Y.  
 Phoenix Specialty Mfg. Co., New York.  
 Rebele, L. J., New York, N. Y.  
 Standard Mfg. & Supply Co., Philadelphia, Pa.  
 Star Felt Cutting Co., The, Brooklyn, N. Y.  
 Sutherland Leather & Felt Co., Detroit, Mich.  
 York, N. Y.  
 U. S. Indestructible Gasket Co., New York, N. Y.

**GASKETS, GAGE GLASS.**

- (See "Washers, Gage Glass," and "Preservers, Gage Glass.")

**GASKETS, LEATHER, FIBRE AND PAPER.**

- Adams, C. F., Fort Worth, Texas.  
 Advance Felt Specialty & Cutting Co., Chicago, Ill.  
 Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 American Vulcanized Fibre Co., Wilmington, Del.  
 Baeder, Adamson Co., Philadelphia, Pa.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Brawley, T. R., Brooklyn, N. Y.  
 Butterworth Supply Co., Philadelphia, Pa.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Cincinnati Gasket & Packing Co., Cincinnati, O.  
 Continental Fibre Co., Newark, Del.  
 Davey Fibre Products Co., Jersey City, N. J.  
 Delaware Hard Fibre Co., Wilmington, Del.  
 ♦ Diamond State Fibre Co., Bridgeport, Pa.  
 Endura Mfg. Co., Philadelphia, Pa.  
 Fibre Finishing Co., Boston, Mass.  
**Fieldco—E. B. Field & Co.**, Worcester, Mass.  
 Forest City Leather Washer Co., Rockford, Ill.  
 Graton & Knight Mfg. Co., Worcester, Mass.  
 Illinois Mechanical Leather Co., Chicago, Ill.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Leather Parts Co., Indianapolis, Ind.  
 Marsh, Chas. W., Co., Muskegon, Mich.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Pneumetalastic—U. S. Indestructible Gasket Co., New York, N. Y.  
 Rebele, L. J., New York, N. Y.  
 Right—Gasket Supply Co., The, Philadelphia, Pa.  
 Rockford Leather Washer Co., Rockford, Ill.  
 ♦ Schieren—Chas. A. Schieren & Co., New York (leather).  
 Standard Mfg. & Supply Co., Philadelphia, Pa.  
 Sutherland Leather & Felt Co., Detroit, Mich.  
 U. S. Indestructible Gasket Co., New York, N. Y.  
 ♦ Vanda—United States Rubber Co., Mechanical Goods Div., New York.  
 Vim—E. F. Houghton & Co., Philadelphia, Pa.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.  
 Wilmington Fibre Specialty Co., Wilmington, Del.  
 Woodward-Wanger Co., Philadelphia, Pa.

**GASKETS, MANHOLE AND HANDHOLE.**

- (See "Gaskets, Rubber and Tubular.")

**GASKETS, METALLIC.**

- (See "Gaskets, Asbestos-Metallic" and "Gaskets, Brass, Bronze, Etc.")

**GASKETS, RUBBER.**

- Anchor Packing Co., The, Philadelphia, Pa.  
 Bache, Semon & Co., New York.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 ♦ Belmont, Petrola—Belmont Packing & Rubber Co., Philadelphia, Pa.

- Booth—The Booth Felt Co., Brooklyn, N. Y.  
 ♦ Boston Belting Corp., Boston, Mass.  
 Brandt's Triple Expansion—Randolph Brandt, New York, N. Y.  
 ♦ B. W. H. C. I.—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Canfield—H. O. Canfield Co., Bridgeport, Conn.  
**Canfield Rubber Co.**, Bridgeport, Conn.  
 Century—The Pennsylvania Rubber Co., Jeannette, Pa.  
 Cincinnati Gasket & Packing Co., Cincinnati, O.  
 ♦ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ Combination Rubber Mfg. Co., The, Bloomfield, N. J.  
 Congress-Maquire Rubber Co., New York, N. Y.  
 Consolidated Rubber Co., Trenton, N. J.  
 ♦ Contractors'—Goodrich Rubber Co., B. F., Akron, O.  
 ♦ Diamond Rubber Co., Inc., The, Akron, O.  
 Dominion Asbestos & Rubber Corp., New York, N. Y.  
 Double Fold—La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Double Service Packing Co., Philadelphia, Pa.  
 Drum, S. R., Mfg. Co., Chicago, Ill.  
 Eagleline—Eagle Oil & Supply Co., Boston, Mass.  
 Elkhart Rubber Works, Elkhart, Ind.  
 Essex—Essex Rubber Co., Trenton, N. J.  
 ♦ General Asbestos & Rubber Co., Charleston, S. C.  
 Gleaner—La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Good—Good Mfg. Co., Inc., New York, N. Y.  
 Goodrich—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Goodyear Tire & Rubber Co., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., The, New York.  
 Hart Packing Co., Boston, Mass.  
 Helios Crandall—Crandall Packing Co., New York.  
 Hewitt Rubber Co., Buffalo, N. Y.  
 Hub—Geo. W. Knowlton Rubber Co., Boston, Mass.  
 Hudson, Clermont, Hi-Test—Hudson Mech'l Rubber Co., New York.  
 Hudson Mech'l Rubber Co., New York, N. Y.  
 Hudsoniz—Danubil Co., Inc., New York, N. Y.  
 Indian-Red—The Diamond Rubber Co., Akron, O.  
 Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
 Janos Asbestos Co., New York.  
 ♦ Jenarco—Jenkins Bros., New York, N. Y.  
 ♦ Jenkins 96—Jenkins Bros., New York, N. Y.  
 ♦ J-M Liberty—H. W. Johns-Manville Co., New York.  
 Johnson's—The Henry Johnson Co., Jersey City, N. J.  
 Kansas City Rubber & Belting Co., Kansas City, Mo.  
 Koo-I-Noor—The Diamond Rubber Co., Akron, O.  
 Liberty Mfg. Co., The, East Norwalk, Conn.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 Manhattan Rubber Mfg. Co., Passaic, N. J.  
 Mikesell Brothers Co., Chicago, Ill.  
 N. B. O., Red Rose—Home Rubber Co., Trenton, N. J.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 Phoenix Specialty Mfg. Co., New York.  
 Pioneer Rubber Mills, San Francisco, Calif.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Rebele, L. J., New York, N. Y.  
 ♦ Republic Rubber Corp., The, Youngstown, O.  
 Right—Gasket Supply Co., Philadelphia, Pa.  
 ♦ Ruby—New York Belting & Packing Co., Ltd., New York, N. Y.  
 ♦ Rubberbestos—A. W. Chesterton Co., Boston, Mass.  
 ♦ Salamanda—New York Belting & Packing Co., Ltd., New York, N. Y.  
 Selector—Maquire Rubber Co., New York, N. Y.  
 Silver Leaf—The Diamond Rubber Co., Akron, O.  
 Standard Mfg. & Supply Co., Philadelphia, Pa.  
 Titan—The Diamond Rubber Co., Akron, O.  
 Tribune—Continental Rubber Works, Erie, Pa.  
 Triple Expansion Zena—Randolph Brandt, New York, N. Y.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Eclipse, Rainbow, Paramo, C. I.  
 Victor Mfg. & Gasket Co., Chicago, Ill.  
 ♦ Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 Vulcabeston—Johns-Pratt Co., Hartford, Conn.  
 Walsh—Walsh Packing Co., Philadelphia, Pa.  
 Watts—John M. Watts Sons, Philadelphia, Pa.  
 W. & B.—Wise & Bailey, Philadelphia, Pa.  
 Western Rubber Co., Goshen, Ind.  
 Wilbow—Williams-Bowman Rubber Co., Chicago.  
 Wolverine—Wolverine Brass Works, Grand Rapids.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 YLDR—Wilder Mfg. Co., St. Louis, Mo.

**GASKETS, TUBULAR.**

- Albion—Albion Mfg. Co., Seattle, Wash.  
 Asbestos Fibre Spinning Co., North Wales, Pa.  
 ♦ Boston Belting Corp., Boston, Mass.  
 Consolidated Rubber Co., Trenton, N. J.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 ♦ Delta—General Asbestos & Rubber Co., Charleston, S. C.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Drum, S. R., Mfg. Co., Chicago, Ill.  
 Durobeston—Albion Mfg. Co., Seattle, Wash.  
 Ebonite—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Eclipse—United States Rubber Co., Mechanical Goods Div., New York.

- Flexitallic—Flexitallic Gasket Co., Camden, N. J.
- ◆ Forsyth—Boston Belting Corp., Boston, Mass.
- Gleaner—La Favorite Rubber Mfg. Co., Paterson, N. J.
- Goetz Gasket & Packing Co., New Brunswick, N. J.
- ◆ Goodrich—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Ideal—General Asbestos & Rubber Co., Charleston, S. C.
- Janos Asbestos Co., New York.
- ◆ Jenarco—Jenkins Bros., New York, N. Y.
- ◆ Jenkins 98—Jenkins Bros., New York, N. Y.
- Johnson's—The Henry Johnson Co., Jersey City, N. J.
- Phoenix Specialty Mfg. Co., New York.
- Pneumetalastic—U. S. Indestructible Gasket Co., New York, N. Y.
- Right—Gasket Supply Co., Philadelphia, Pa.
- ◆ Ruby—New York Belting & Packing Co., New York, N. Y.
- ◆ Sandow, Solace—Cincinnati Rubber Mfg. Co., The, Cincinnati, O.
- ◆ Semibronze—General Asbestos & Rubber Co., Charleston, S. C.
- Union Rubber & Asbestos Co., Trenton, N. J.
- Wilcox—E. A. Wilcox Mfg. Co., Chicago, Ill.
- Wise & Bailey, Philadelphia, Pa.

**GASOLINE STORAGE SYSTEMS.**

(See "Systems, Gasoline Storage.")

**GASOMETERS.**

- Koven & Brother, L. C., Jersey City, N. J.
- Tranter—Tranter Mfg. Co., Pittsburgh, Pa.

**GATES, ASH DISCHARGE.**

- De Luxe—United Conveyor Corporation, Chicago, Ill.

**GATES, BLAST.**

- Baker, Dunbar, Allen Sales Co., Cleveland, O.
- Berger Bros. Co., Philadelphia, Pa.
- Grindle Fuel Equipment Co., Chicago, Ill.
- Improved Appliance Co., Brooklyn, N. Y.
- Lehigh—Hersh & Brother, Allentown, Pa.
- Miner & Peck Mfg. Co., Derby, Conn.
- Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.
- Potts, D. H. Co., Lancaster, Pa.
- Rockwell—W. S. Rockwell Co., New York, N. Y.
- Skinner Bros. Mfg. Co., St. Louis, Mo.
- Western Chief—Canedy-Otto Mfg. Co., Chicago Heights, Ill.

**GATES, CANAL.**

- Hunt, Rodney Machine Co., Orange, Mass.

**GATES, ELEVATOR, SAFETY.**

- Richmond—Richmond Safety Gate Co., Richmond, Ind.

**GATES, FLAP AND SHEAR.**

- McDonald, H. W. & Co., Columbus, O.

**GATES OR FAUCETS, OIL, MOLASSES, ETC.**

- B. K.—Eagle—Eclipse—Chas. I. Allen, Pequabuck, Conn.
- Perfection—E. U. Scoville Co., Manlius, N. Y.
- Perfection—The Rauch Mfg. Co., Galena, Kan.
- Safety Lock—E. U. Scoville Co., Manlius, N. Y.
- Sargent & Co., New Haven, Conn.
- Scoville Pattern, Clipper—Clipper Tool Co., Buffalo, N. Y.
- Stearns, E. C., & Co., Syracuse, N. Y.

**GATES, MINE CAGE, AUTOMATIC SAFETY.**

- Miller—Diamond Machine Co., Monongahela, Pa.

**GATES, ONE BIN.**

- Allis-Chalmers Co., Milwaukee, Wis.
- Link-Belt Company, Chicago and Philadelphia.
- Minneapolis Steel & Mach'y Co., Minneapolis, Minn.
- Perfect—Rauch Mfg. Co., The, Galena, Kan.
- Perfection—The Rauch Mfg. Co., Galena, Kans.
- Power & Mining Mach'y Co., New York, N. Y.
- Seaverns, James B., Chicago, Ill.
- Smith—T. L. Smith Co., The, Milwaukee, Wis.
- Stephen-Adamson Mfg. Co., Aurora, Ill.
- Wellman-Seaver-Morgan Co., Cleveland, O.

**GATES, SKIM.**

- Sterling Wheelbarrow Co., West Allis, Wis.

**GATES, SLUICE.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- American Spiral Pipe Works, Chicago, Ill.
- Best—Best Co., Pittsburgh, Pa.
- Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.
- Coffin Valve Co., Boston, Mass.
- Coldwell-Wilcox Co., New York, N. Y.

- Columbian Iron Works, Chattanooga, Tenn.
- Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.
- Fox, John, & Co., New York, N. Y.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Kennedy Valve Mfg. Co., Elmira, N. Y.
- Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.
- Standard Spiral Pipe Works, Chicago, Ill.
- Treadwell, M. H. Co., Inc., New York, N. Y.
- Wellman-Seaver-Morgan Co., Cleveland, O.
- Wood & Co., R. D., Philadelphia, Pa.

**GAUGES.**

(See "Gages").

**GATES, WATERWORKS.**

- Golden Anderson Valve Specialty Co., Pittsburgh, Pa.

**GEARS, BRASS AND STEEL.**

- Boston Gear Works, Norfolk Downs, Mass.
- Welch, T. F., & Co., Boston, Mass.
- Western Screw Products Co., St. Louis, Mo.

**GEARS, HAUL-OFF.**

- Streich, A. & Bro. Co., Oshkosh, Wis.

**GEARS AND PINIONS, BAKELITE.**

- Simonds Mfg. Co., The, Pittsburgh, Pa.

**GEARS AND PINIONS, IRON AND STEEL.**

- Adams Co., The, Dubuque, Ia.
- Akron Gear & Engineering Co., Akron, Ohio.
- Albaugh-Dover Co., Chicago, Ill.
- American Die & Tool Co., Reading, Pa.
- Boston Gear Works, Norfolk Downs, Mass. (Stock or Standard Gears).
- Boyer—Chicago Pneumatic Tool Co., Chicago, Ill.
- Brown Co., The A. & F., New York, N. Y.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- Caldwell-Walker—H. W. Caldwell & Son Co., Chicago, Ill.
- Christiana Machine Co., Christiana, Pa.
- Cincinnati Gear Co., The, Cincinnati, O.
- Constant, B. S., Mfg. Co., The, Bloomington, Ill.
- Detroit Gear & Machine Co., Detroit, Mich.
- ◆ Dodge Sales & Engineering Co., Mishawaka, Ind. (spur, mitre, bevel, mortise and paper friction).
- Earle Gear & Machinery Co., Philadelphia, Pa.
- Eastwood Wire Mfg. Co., Belleville, N. J.
- Farrell Fdy. & Mach. Co., Ansonia, Conn.
- Fawcett—Fawcett Machine Co., Pittsburg, Pa.
- Fitz Water Wheel Co., Hanover, Pa.
- Foot Bros. Gear & Machine Co., Pittsburg, Pa.
- Franklin Machine Co., Providence, R. I.
- Ganschow Co., Wm., Chicago, Ill.
- Garfield Machine Works, Garfield, N. J.
- Garvin Machine Co., The, New York, N. Y.
- Gleason—The Gleason Works, Rochester, N. Y.
- Grant Gear Works, Boston, Mass.
- Great Western Mfg. Co., Leavenworth, Kan.
- Greenwald & Co., J. & E., Cincinnati, O.
- Hardie—Tynes Mfg. Co., Birmingham, Ala.
- Helicoid—H. W. Caldwell & Son Co., Chicago, Ill.
- ◆ Hill Clutch Co., The, Cleveland, O.
- Hindley—Albro-Clem Elevator Co., Philadelphia, Pa.
- Horsburgh & Scott Co., The, Cleveland, O.
- Huntsville Foundry & Machine Co., Huntsville, Ill.
- Illinois Tool Works, Chicago, Ill.
- ◆ J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.
- James Mfg. Co., D. O., Chicago, Ill.
- ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- ◆ Jones Foundry & Machine Co., W. A., Chicago, Ill.
- Karge System, Inc., Phoenix, N. Y.
- Link-Belt Company, Chicago and Philadelphia.
- Little Giant—Chicago Pneumatic Tool Co., Chicago.
- Maag—Pratt & Whitney Co., Hartford, Conn.
- Meacham Gear Corp., Syracuse, N. Y.
- ◆ Medart Patent Pulley Co., St. Louis, Mo.
- Meesse & Gottfried Co., San Francisco, Cal.
- Meisselbach-Catucci Mfg. Co., Newark, N. J.
- Mesta Machine Co., The, Pittsburg, Pa.
- Morse Chain Co., The, Ithaca, N. Y.
- Morgan Construction Co., Worcester, Mass.
- Naylor Bros., Peekskill, N. Y.
- Newark Gear Cutting Machine Co., Newark, N. J.
- ◆ Nordyke & Marmon Co., Indianapolis, Ind.
- Nuttall—R. D. Nuttall Co., Pittsburg, Pa.
- Philadelphia Gear Works, Inc., Philadelphia, Pa.
- Plamondon—Plamondon Mfg. Co., Chicago, Ill.
- Pyott Co., Chicago, Ill.
- Rex—Chain Belt Co., Milwaukee, Wis.
- Rockwood—The Rockwood Mfg. Co., Indianapolis, Ind.
- Sawyer Gear Works, Cleveland, O.
- Shays, J. R., Jr., New York, N. Y. (spur and worm reducing).
- Shriver & Co., T. Harrison, N. J.
- Simonds Mfg. Co., The, Pittsburgh, Pa.
- Smith-Valle—The Platt Iron Works Co., Dayton, O.
- Southwark Fdy. & Mach. Co., Philadelphia, Pa.
- Sprout, Waldron & Co., Muncy, Pa.

- Stahl Gear & Machine Co., Cleveland, O.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Stevenson Gear Co., Indianapolis, Ind.  
 Syracuse Gear Co., Syracuse, N. Y.  
 Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
 Tisco—Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Townsend Furnace & Machine Shop Co., Albany, N. Y.  
 United Engineering & Fdy. Co., Pittsburg, Pa.  
 Van Dorn & Dutton Co., The, Cleveland, O.  
 ♦ Webster Mfg. Co., The, Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.  
 Weller Mfg. Co., Chicago, Ill.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio  
 Williams, J. H., & Co., Brooklyn, N. Y.  
 Wolf Co., The, Chambersburg, Pa.  
 Woodward Machine Co., The, Wooster, O.  
 ♦ Worcester Pressed Steel Co., Worcester, Mass. (punched).

#### GEARS AND PINIONS, RAWHIDE AND FIBRE.

- American Vulcanized Fibre Co., Wilmington, Del.  
 Chattanooga Machinery Co., Chattanooga, Tenn.  
 ♦ Chicago Rawhide Co., The, Chicago, Ill.  
 Cincinnati Gear Co., The, Cincinnati, O.  
 ♦ Delaware Hard Fibre Co., Wilmington, Del.  
 ♦ Diamond State Fibre Co., Bridgeport, Pa.  
 Earl Gear & Machinery Co., Philadelphia, Pa.  
 Fabroil—General Electric Co., Schenectady, N. Y.  
 Fawcus—Fawcus Machine Co., Pittsburg, Pa.  
 Ganschow Co., Wm., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Grant Gear Works, Boston, Mass.  
 Hedason Mfg. Co., New Haven, Conn.  
 Holbrook Raw Hide Co., Providence, R. I.  
 Horsburgh & Scott Co., The, Cleveland, O.  
 Illinois Mechanical Leather Co., Chicago, Ill.  
 James, D. O., Mfg. Co., Chicago, Ill.  
 ♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 New Process—The New Process Gear Corp., Syracuse, N. Y.  
 Northern Engineering Works, Detroit, Mich.  
 Philadelphia Gear Works, Inc., Philadelphia, Pa.  
 Quirde Company, Syracuse, N. Y.  
 Simonds Mfg. Co., The, Pittsburgh, Pa.  
 Stahl Gear & Machine Co., Cleveland, O.  
 Standard Fibre Co., Somerville, Mass.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Syracuse Gear Co., Syracuse, N. Y.  
 Union Foundry & Machine Co., Pittsburg, Pa.  
 Van Dorn & Dutton Co., Cleveland, O.  
 Western Rawhide & Belting Co., Milwaukee, Wis.

#### GEARS, REVERSE.

- Baldrige—Brown Clutch Co., The, Sandusky, O.  
 Ganschow Co., Wm., Chicago, Ill.  
 Johnson—The Carlyle Johnson Machine Co., Manchester, Conn.  
 ♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 McKinnon Iron Works Co., The, Ashtubula, O.  
 Paragon—Paragon Gear Works, Taunton, Mass.  
 Syracuse Gear Co., Syracuse, N. Y.  
 Union Foundry & Machine Co., Pittsburg, Pa.

#### GEARS, SPEED REDUCTION UNITS.

- Covant—Wm. Ganschow Co., Chicago, Ill.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Economy—Kerr Turbine Co., Wellsville, N. Y.  
 Falk Co., The, Milwaukee, Wis.  
 Fawcus—Fawcus Machine Co., Pittsburg, Pa.  
 Herrington—Moore Steam Turbine Corp., Wellsville, N. Y.  
 IXI—Foote Bros. Gear Machine Co., Chicago, Ill.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Nuttall, R. D., Co., Pittsburg, Pa.  
 Palmer-Bee Co., Detroit, Mich.  
 Philadelphia Gear Works, Inc., Philadelphia, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Terry Steam Turbine Co., Hartford, Conn.  
 Westinghouse—Westinghouse Machine Co., East Pittsburgh, Pa.

#### GEARS, STEERING, PILOT HOUSE (STEAM).

- Dake—Dake Engine Co., Grand Haven, Mich.

#### GEARS, SWINGING.

- Dake Engine Co., Grand Haven, Mich.  
 Ganschow Co., Wm., Chicago, Ill.  
 Union Foundry & Machine Co., Pittsburg, Pa.

#### GELATIN, BLASTING.

- ♦ Repauno—Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.  
 Vigorite—Atlas Powder Co., Wilmington, Del.

#### GENERATING SETS, ELECTRIC.

- A. B. C.—American Blower Co., Detroit, Mich.  
 Allis-Chalmers Co., Milwaukee, Wis.

- Bennett—O'Connell Co., Chicago, Ill.  
 Bissell—The F. Bissell Co., Toledo, O.  
 Bodine Electric Co., Chicago, Ill.  
 Crooker—Wheeler Co., Ampere, N. J.  
 Cushman—Cushman Motor Works, Lincoln, Neb.  
 Diehl Mfg. Co., Elizabeth, N. J.  
 Dodge—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Engberg's Elec. & Mac'l Works, St. Joseph, Mich.  
 Engineering Electric Mfg. Co., Stamford, Conn.  
 Esco—Electric Specialty Co., Stamford, Conn.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Fay & Bowen Engine Co., Geneva, N. Y.  
 General Electric Co., Schenectady, N. Y.  
 High-Grade—Eck Dynamo & Motor Co., Belleville, N. J.  
 Holtzer—Cabot Electric Co., Roxbury, Boston, Mass.  
 Ide—A. L. Ide & Sons, Springfield, Ill.  
 Kerr Turbine Co., Wellsville, N. Y.  
 Kewanee Private Utilities Co., Kewanee, Ill.  
 Peerless—Peerless Electric Co., The, Warren, O.  
 Portland Co., The, Portland, Me.  
 Robbins & Myers Co., The, Springfield, O. (motor)  
 Sprague Electric Works of General Electric Co., New York, N. Y.  
 Sturtevant—Sturtevant Co., B. F., Hyde Park, Mass.  
 Terry—Terry Steam Turbine Co., Hartford, Conn.  
 Triumph Electric Co., Cincinnati, Ohio.  
 Wagner Electric Mfg. Co., St. Louis, Mo.  
 Western Electric Co., Chicago, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburg, Pa.  
 ♦ Willey—James Clark, Jr., Inc., Louisville, Ky.  
 Winton—The Winton Co., Cleveland, O.  
 Zin-Ho—H.-B. Compressor & Pump Co., Chicago, Ill.

#### GENERATORS, ACETYLENE, FOR WELDING.

- Davis—Davis Acetylene Co., Elkhart, Ind.  
 Economy—Economy Welding Machine Co., Kansas City, Mo.  
 Imperial—Imperial Brass Mfg. Co., Chicago, Ill.  
 ♦ Macleod Co., Cincinnati, O.  
 Messer Welding Supply Corp., Brooklyn, N. Y.  
 Metals Welding Co., Cleveland, O.  
 Milburn, Alexander Co., The, Baltimore, Md.  
 Pilot—Oxweld Acetylene Co., Chicago, Ill., and Newark, N. J.  
 Torchweld Equipment Co., Chicago, Ill.  
 Williamson—Oxweld Acetylene Co., Chicago, Ill., and Newark, N. J.

#### GENERATORS, ELECTRIC, STEAM TURBINE.

- Steam Motors Co., Springfield, Mass.  
 The Terry Steam Turbine Co., Hartford, Conn.

#### GENERATORS OR REGULATORS, HEAT, FOR HOT WATER HEATING SYSTEMS.

(See also Regulators, Damper and Regulators Temperature.)

- Ball Seal—Ball Seal Generator Co., Easton, Pa.  
 Belknap Mfg. Co., The, Bridgeport, Conn.  
 Clow Temperature Booster—James B. Clow & Sons, Chicago, Ill.  
 D. & T.—The D. & T. Mfg. Co., St. Louis, Mo.  
 Hart Generator Co., Easton, Pa.  
 Honeywell—Honeywell Heating Specialty Co., Wabash, Ind.  
 Knickerbocker—Knickerbocker Valve Co., Oneida, N. Y.  
 Milwaukee—The Milwaukee Heater Mfg. Co., Milwaukee, Wis.  
 Nefco—N. E. Frost Co., Chicago, Ill.  
 Phelps—Phelps Bros. Co., New York, N. Y.  
 Phelps—Ideal Mfg. & Supply Co., Oskaloosa, Iowa.  
 Ryan, E. J., Danville, Ill.  
 Taylor Syphon Circulator-Taylor Steam Specialty Co., Battle Creek, Mich.  
 Tillman Heating Device Co., Indianapolis, Ind.  
 Thrush—H. A. Thrush & Co., Peru, Ind.  
 Watson—The Watson Specialty Co., Terre Haute, Ind.

#### GENERATORS, HOT WATER.

(See, also, "Heaters, Auxiliary.")

- Bate & Son, W. T., Conshohocken, Pa.  
 Carroll & Sons, P., Philadelphia, Pa.  
 Colles—E. G. T. Colles Co., Chicago, Ill.  
 Economy—Economy Gas Heater Co., The, Cincinnati, O.  
 Eureka—Krein Mfg. Co., The, Wapakoneta, O.  
 F. A. T.—Frederick A. Tyler, Albany, N. Y. (for domestic use).  
 Garrett, W. D., & Co., New York.  
 Goubert—The Griscom-Russell Co., New York.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hotstream—Hotstream Heater Co., Cleveland, O.  
 Kane Mfg. Co., Wm., Philadelphia, Pa.  
 Kelley, Ben. F., & Son, New York, N. Y.  
 Lawler Automatic—Lawler's Regulator Co., New York, N. Y.  
 Minneapolis—R. R. Howell & Co., Minneapolis, Minn.  
 National—The National Pipe Bending Co., New Haven, Conn.  
 Osceola—Simplex Light Co., Amery, Wis.



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 Phoebus—Manhattan Screw & Stamping Works, New York, N. Y.  
 Puritan—Crescent Foundry & Furnace Co., Des Moines, Ia.  
 Reading—Reading Heater & Supply Co., Reading, Pa.  
 R. & F.—Ryan & Fitzpatrick Co., Inc., Troy, N. Y.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 ♦ Sims—The Sims Co., Erie, Pa.  
 Smith & Son Co., Samuel, Paterson, N. J.  
 Triumph—James B. Clow & Son, Chicago, Ill.  
 Tyler's—Fredrick A. Tyler, Albany, N. Y.  
 Weld, Geo. A. & Co., Boston, Mass.  
 Wilks—Wilks S Mfg. Co., Chicago, Ill.

**GENERATORS, OXYGEN AND HYDROGEN.**

Burdett Mfg. Co., Chicago, Ill.  
 I. O. C.—International Oxygen Co., Newark, N. J.  
 Norwalk Iron Works Co., South Norwalk, Conn.  
 Shriver—Shriver, T. & Co., Harrison, N. J.  
 Sowers Mfg Co., Buffalo, N. Y.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.

**GENERATORS, STEAM.**

Akron Rubber Mold & Machine Co., Akron, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Lattner—P. M. Lattner Mfg. Co., Cedar Rapids, Ia.  
 McKee—Eclipse Fuel Eng. Co., Rockford, Ill.  
 Model—John Trageser Steam Copper Works, New York, N. Y.  
 Moore Steam Turbine Corp., Wellsville, N. Y.

**GENERATORS, VACUUM, HYDRAULIC.**

Penberthy—Penberthy Injector Co., Detroit, Mich.

**GIANTS, HYDRAULIC MINING.**

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Georgia Iron Works, Augusta, Ga.  
 Hendy, Joshua, Iron Works, San Francisco, Cal.  
 Seattle Machine Works, Seattle, Wash.  
 Sims—The Sims Co., Erie, Pa.  
 Thompson Iron Works, The, Philadelphia, Pa.  
 United Iron Works, Oakland, Cal.

**GLASS, WIRE.**

Bache, Semon & Co., New York.  
 Highland Glass Co., Washington, Pa.  
 Marietta Glass Mfg. Co., Indianapolis, Ind.  
 Mississippi Wire Glass Co., New York, N. Y.  
 ♦ Pennsylvania Wire Glass Co., Philadelphia, Pa.

**GLASSES, GAGE.**

Advance—Advance Packing & Supply Co., Chicago, Ill.  
 ♦ American—American Injector Co., Detroit, Mich.  
 ♦ American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 A-Y-A—Adkins, Young & Allen Co., Chicago, Ill.  
 Beacon—H. A. Rogers Co., New York, N. Y.  
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 Duraco—United States Asbestos Co. of Illinois, Chicago, Ill.  
 "Ernst Nonbreakable" Protected Safety—Ernst & Co., Newark, N. J.  
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 Eureka—Semon Bache & Co., New York, N. Y.  
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 Invincible—Nason Mfg. Co., New York.  
 Jumbo—The Magee Valve Co., New York, N. Y.  
 Libbey Glass Mfg. Co., Toledo, O.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 Macbeth-Evans Glass Co., Pittsburgh, Pa.  
 Maltese—Semon Bache & Co., New York, N. Y.  
 ♦ Mechanical Rubber Co., The, Cleveland, O.  
 ♦ Michigan—Michigan Lubricator Co., Detroit, Mich.  
 Moncrieff—H. A. Rogers Co., New York, N. Y.  
 Monitor—Mulconroy Co., Inc., Philadelphia, Pa.  
 Ozark—Geo. L. Hammons, Inc., Chicago, Ill.  
 Perth—H. A. Rogers Co., New York, N. Y.  
 Pneumetalastic—U. S. Indestructible Casket Co., New York, N. Y.  
 Red—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 Regent Glass—Ivanhoe Regent Works of General Electric Co.  
 Reindeer—The Pennsylvania Rubber Co., Jeannette, Pa.  
 Resisto—Schaeffer & Rudenberg Mfg. Co., New York.  
 Safety First—John F. Robertson Co., Pittsburgh, Pa.  
 Sampson—Spaulding & Metcalf, Philadelphia, Pa.  
 Scotch—Montgomery & Co., New York, N. Y.  
 ♦ Sonderglas, McGregor—Chesterton Co., A. W., Boston, Mass.  
 Skihl—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Solace—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 Sterling Scotch—H. Belfield & Co., Philadelphia, Pa.  
 Strong Machinery & Supply Co., New York, N. Y.  
 Superior—Cincinnati Gasket & Packing Co., Cincinnati, O.  
 Tenax—Nason Mfg. Co., New York.  
 Uniflo—H. A. Rogers Co., New York, N. Y.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.

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- ◆ American—American Injector Co., Detroit, Mich.
- American—American Lubricator Co., Detroit, Mich.
- Beacon Red—H. A. Rogers Co., New York, N. Y.
- Deerco—Deer Glass Co., Vineland, N. J.
- Essex Brass Corp., Detroit, Mich.
- Eureka—Semon Bache & Co., New York, N. Y.
- Hall Mfg. Co., New York, N. Y.
- Libbey—Libbey Glass Mfg. Co., Toledo, O.
- Loneragan Co., J. E., Philadelphia, Pa.
- ◆ Lunkenheimer Co., Cincinnati, O.
- ◆ McGregor—A. W. Chesterton & Co., Boston, Mass.
- ◆ Michigan Lubricator Co., Detroit, Mich.
- Moncrieff—H. A. Rogers Co., New York, N. Y.
- National Brass Mfg. Co., Rochester, N. Y.
- Perth—H. A. Rogers Co., New York, N. Y.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Rogers—H. A. Rogers Co., New York, N. Y.
- Unido—H. A. Rogers Co., New York, N. Y.

#### GLAZIERS' POINTS.

Zinc City, Star—W. H. Maze Co., Peru, Ill.

#### GLOVES AND MITTENS, ASBESTOS.

- Asbestos Fibre Spinning Co., North Wales, Pa.
- Asbestos Textile Co., Inc., New York, N. Y.
- Dominion Asbestos and Rubber Corp., New York.
- Holcomb Safety Garment Co., Chicago, Ill.
- ◆ Johns-Manville, Inc., New York.
- Mikesell Bros. Co., Chicago, Ill.
- Steel-Grip—Hickory Steel-Grip Glove Co., Inc., Chicago, Ill. (steel reinforced).
- Wheeler, F. H., Mfg. Co., Chicago, Ill.

#### GLOVES, OIL PROOF FABRIC.

All Wear—All Wear Glove Co., Fairport, N. Y.

#### GLOVES, RUBBER.

- Canton Rubber Co., Canton, O.
- Consumers' Rubber Co., Cleveland, O.
- Faultless Rubber Co., Ashland, O.
- Goodrich, B. F., Co., Akron, O.
- Goodyears India Rubber Glove Co., New York.
- Hodgman Rubber Co., Tuckahoe, N. Y.
- Miller Rubber Mfg. Co., Akron, O.
- National India Rubber Co., Bristol, R. I.
- Rubber Products Co., Barberton, O.
- Seamless Rubber Co., New Haven, Conn.
- Tyer Rubber Co., Andover, Mass.

#### GLUE.

- American Glue Co., Boston, Mass.
- Armour Glue Works, Chicago.
- Baeder, Adamson & Co., Philadelphia, Pa.
- Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md. (Fireproof.)
- Buchanan, Thos., & Co., Cincinnati, O.
- California Glue Works, San Francisco, Cal.
- Chicago Glue Co., Chicago.
- Commonwealth Glue Co., Boston, Mass.
- Conrad-Kammerer, New Albany, Ind.
- Consumers Glue Co., Boston, Mass.
- Cooper's, Peter, Glue Factory, New York and Chicago.
- Couch, B. T., & Co., Buffalo, N. Y.
- Coulson, Edw. L., Baltimore, Md.
- Cudahy Packing Co., Kansas City, Mo.
- Delany & Co., Philadelphia, Pa.
- Diamond Glue Co., Chicago.
- Dodd, A. W., & Co., Gloucester, Mass.
- ◆ Du Pont Chemical Works, New York, N. Y.
- Eagle Glue & Curled Hair Co., New York.
- Eastern Tanners Glue Co., Gowanda, N. Y.
- Elwell, B. F., Glue Co., Rockport, Mass.
- Frost & Adams Co., Boston, Mass.
- Fuller's—H. B. Fuller Co., St. Paul, Minn.
- Fulton County Glue Co., Gloversville, N. Y.
- Gloucester Isinglass & Glue Co., Gloucester, Mass.
- Grand Rapids Glue Co., Grand Rapids, Mich.
- Grasselli Chemical Co., Cleveland, O.
- Hammond Glue Co., Boston, Mass.
- Helmet—Charles H. Besly & Co., Chicago, Ill.
- Herrman, Jos. F., & Co., Chicago.
- Hewitt, C. B., & Bros., New York.
- Hirsch, Stein & Co., Chicago, Ill.

- Holt, Jno., & Co., Lowell, Mass.
- Keystone Glue Co., Williamsport, Pa.
- Kuhls, H. B. Fred., Brooklyn, N. Y.
- Lamparter, Geo., Lancaster, Pa.
- Le Page's—Russia Cement Co., Gloucester, Mass.
- Lister's Agricultural Chem. Wks., New York.
- Martin's—International Glue Co., Boston, Mass.
- Mathiason, P. B., Mfg. Co., St. Louis, Mo.
- Michigan Carbon Works, Detroit, Mich.
- Milligan & Higgins Glue Co., New York.
- National Process Co., Indianapolis, Ind.
- National Gum & Mica Co., New York.
- Northwestern Glue Co., Chicago.
- Perkins Glue Co., South Bend, Ind.
- Royal Glue Co., Washington, D. C.
- St. Louis Glue Mfg. Co., St. Louis, Mo.
- Standard Glue Co., Baltimore, Md.
- Standard Glue Works, Boston, Mass.
- Stephens & Bro., Cincinnati, O.
- Stevenot, Chas. J., & Co., New York.
- Styx—M. Feigel & Bro., Inc., New York, N. Y.
- Swift & Co., Chicago.
- Tamm Bros. Glue Co., St. Louis, Mo.
- Too Listen, Chicago, Ill.
- Tunnell, F. W., & Co., Philadelphia, Pa.
- United States Glue Co., Milwaukee, Wis.
- Waddell, R. J., & Co., New York.
- Western Cement & Glue Co., Chicago, Ill.

#### GOGGLES, INDUSTRIAL WORKERS.

(See, also, "Protectors, Eyes.")

- Adjustoglas—The Safety Equipment Service Co., Cleveland, O.
- Fyber-Weld and C. E. S. Co.—Chicago Eye Shield Co., Chicago, Ill.
- Harco—Hardy, F. A., & Co., Chicago, Ill.
- La France—American La France Fire Engine Co., Elmira, N. Y.
- Johnston Optical Co., Detroit, Mich.
- Milwaukee Optical Mfg. Co., Milwaukee, Wis.
- Protexwell, Reflectoglas—Merry Optical Co., Kansas City, Mo.
- Resistal—Strauss & Buegeleisen, New York, N. Y.
- Standard Optical Co., Geneva, N. Y.
- Strauss & Buegeleisen, New York. Trade names—Eyeteets Nosquint, Ventifex, Allwon, Resistal.
- Willson, T. A., & Co., Inc., Reading, Pa. Trade names—Willson, Super Tough, Opti-Glass, Emerald-Glo, Al-bex, Zylbex, Zyl-Edge, Industro, Universal.

#### GONGS AND BELLS.

- American Foundry & Mfg. Co., St. Louis, Mo.
- American Safety Lamp & Mine Supply Co., Scranton, Pa.
- American Tube & Stamping Co., Bridgeport, Conn.
- Bevin Bros. Mfg. Co., East Hampton, Conn.
- Bliss, E. W., Co., Brooklyn, N. Y.
- Industrial Instrument Co., The, Foxboro, Mass.
- Harrold Tool & Forge Co., Columbiana, O.
- Klaxon—Klaxon Company, Newark, N. J.
- New Departure—S. F. Hayward & Co., New York.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Reiter, G. C., Canton, O.
- Rope Fire Escape Co., Philadelphia, Pa. (elec. and mechanical).
- Union Water Meter Co., The, Worcester, Mass. (steam fire alarm).
- Wall, P., Mfg. Supply Co., Pittsburg, Pa.
- Wallace—Wallace Supplies Mfg. Co., Chicago, Ill. (steel).
- ◆ Walworth Mfg. Co., Boston, Mass.

#### GOOSENECKS, BRANCH.

- Haydenville Co., The, Haydenville, Mass.
- ◆ Hays Mfg. Co., Erie, Pa.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- Mueller Mfg. Co., H., Decatur, Ill.
- ◆ United Brass Mfg. Co., Cleveland, O.

#### GOOSENECKS, CAST IRON.

- American Foundry & Mfg. Co., St. Louis, Mo.
- Clow & Sons, James B., Chicago, Ill.
- Crane Co., Chicago, Ill.
- Duriron—(acid proof)—The Duriron Co., Inc., Dayton, Ohio.
- Federal-Huber Co., Chicago, Ill.
- Glauber Brass Mfg. Co., Cleveland, O.
- Haydenville Co., The, Haydenville, Mass.
- Humphries Mfg. Co., The, Mansfield, O.
- Jones Hollow Ware Co., Baltimore, Md.
- Kupferle Foundry Co., John C., St. Louis, Mo.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- Modern Iron Works, Quincy, Ill.
- Pratt & Cady Co., Hartford, Conn.
- Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.
- Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.
- ◆ United—United Brass Mfg. Co., Cleveland, O.
- U. S. Wind Engine & Pump Co., Batavia, Ill.
- Wolverine Brass Works, Grand Rapids, Mich.

**GOOSENECKS, FOR GAS PORTABLES.**

Liberty Mfg. Co., The, East Norwalk, Conn.  
Park & McKay Co., The, Detroit, Mich.

**GOOSENECKS, LEAD, CORPORATION COCK.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Anderson Forge & Machine Co., Detroit, Mich.  
Bernz, Otto, Newark, N. J.  
Brunsdorf-Mueller Co., Elizabeth, N. J.  
Carver Tool Works, Spring Valley, N. Y.  
Glauber Brass Mfg. Co., Cleveland, O.  
Haydenville Co., The, Haydenville, Mass.  
♦ Hays Mfg. Co., Erie, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Mueller Mfg. Co., H., Decatur, Ill.  
Stortz & Son, John, Philadelphia, Pa.  
Swan & Son, The, James, Seymour, Conn.

**GOUGES.**

Bernz, Otto, Newark, N. J.  
Bradley Sons, G. W., Westport, Conn.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Buck Bros., Millbury, Mass.  
Buck Edge Tool Co., Chas., Millbury, Mass.  
Buffum Tool Co., Louisiana, Mo.  
Challenge—The Harrold Tool & Forge Co., Columbian, O.  
Cincinnati Tool Co., Cincinnati, O.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Greenlee Bros. & Co., Rockford, Ill.  
H. J. H.—The Harrold Tool & Forge Co., Columbian, O.  
Jennings, C. E. & Co., New York, N. Y.  
Mack & Co., Rochester, N. Y.  
Marcy Tool Works, The, Putnam, Conn.  
New England Specialty Co., North Easton, Mass.  
Ohio Tool Co., Columbus, O.  
Reliance Edge Tool Co., Youngstown, O.  
Schmitt, Wm., Co., Newark, N. J.  
Stortz & Son, John, Philadelphia, Pa.  
Swan Co., Jas., Seymour, Conn.  
Union Hardware Co., Torrington, Conn.  
Verona Tool Works, Pittsburgh, Pa.  
White Co., L. & I. J., Buffalo, N. Y.  
Winsted Edge Tool Works, Winsted, Conn.

**GOVERNORS, AIR COMPRESSOR.**

♦ Fisher Governor Co., The, Marshalltown, Iowa.  
Gardner—Gardner Governor Co., Quincy, Ill.  
Ingersoll-Rand Co., New York, N. Y.  
Jarecki Mfg. Co., Erie, Pa.  
McAlear Mfg. Co., The, Chicago, Ill.  
♦ Walworth Mfg. Co., The, Boston, Mass.  
Watson—Watson McDaniel Co., Philadelphia, Pa.  
Westinghouse Traction Brake Co., Pittsburgh, Pa.

**GOVERNORS, BOILER FEED.**

Cleveland—Cleveland Feed Water Regulator Co., The, Cleveland, O.  
♦ Fisher Governor Co., The, Marshalltown, Iowa.  
Fulton—Chaplin, Fulton Mfg. Co., Pittsburgh, Pa.  
Johnson—Johnson Service Co., Milwaukee, Wis.  
Judson—Judson Governor Co., Rochester, N. Y.  
Kitts—Kitts Mfg. Co., Oswego, N. Y.  
McAlear Mfg. Co., The, Chicago, Ill.  
♦ Walworth Mfg. Co., The, Boston, Mass.  
Watson—Watson McDaniel Co., Philadelphia, Pa.  
Williams Gauge Co., The, Pittsburgh, Pa.

**GOVERNORS, COMBUSTION ENGINE.**

Duplex, Simplex—The Duplex Engine-Governor Co., Brooklyn, N. Y.

**GOVERNORS, ENGINE.**

Allis-Chalmers Co., Milwaukee, Wis.  
Bayard—M. L. Bayard & Co., Philadelphia, Pa.  
Boylston's—Chicago Engineer Supply Co., Chicago, Ill.  
Eclipse—Judson Governor Co., Rochester, N. Y.  
Fleur de lis—Boston Steam Specialty Co., Boston, Mass.  
♦ Gardner Governor Co., The, Quincy, Ill.  
Gunther—The Wright Machine Co., Owensboro, Ky.  
♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
Johnson—Johnson Service Co., Milwaukee, Wis.  
Judson—Judson Governor Co., Rochester, N. Y.  
♦ King—Sinker Davis Co., The, Indianapolis, Ind.  
Massey, Jahns—Massey Machine Co., Watertown, Pa.  
McDonough Automatic Regulator Co., Detroit, Mich.  
New Judson—Judson Governor Co., Rochester, N. Y.  
Pickering—The Pickering Governor Co., Portland, Conn. (for steam and gas engine).  
Plouff—The Plouff Company, Boston, Mass.  
Waters—Waters Governor Co., Boston, Mass.

**GOVERNORS, EXCESS PRESSURE.**

♦ Fisher Governor Co., The, Marshalltown, Ia.  
Klippel Mfg. Co., Chicago, Ill.  
Kitts Mfg. Co., Oswego, N. Y.  
McAlear Mfg. Co., The, Chicago, Ill.

**GOVERNORS, FUEL OIL PUMP.**

♦ Fisher Governor Co., The, Marshalltown, Iowa.  
♦ Foster Engineering Co., Newark, N. J.  
Little Giant—G. E. Witt Co., Inc., San Francisco, Cal.  
McAlear Mfg. Co., The, Chicago, Ill.

**GOVERNORS, GAS.**

Davis & Farnum Mfg. Co., Waltham, Mass.  
Emco, Equitable—Equitable Meter Co., Pittsburgh, Pa.  
♦ Fisher Governor Co., The, Marshalltown, Iowa.  
Foulis—Helme & McIlhenny, Philadelphia, Pa.  
Fulton—Chapin Fulton Mfg. Co., Pittsburgh, Pa.  
Gas Tip & Self Lighter Co., New York, N. Y.  
Isbell Porter Co., Newark, N. J.  
Lawler's Automatic—Lawler Regulator Co., New York.  
McAlear Mfg. Co., The, Chicago, Ill.  
Reynolds—Reynolds Gas Regulator Co., Anderson, Ind.

**GOVERNORS, GAS ENGINE.**

Judson Governor Co., Rochester, N. Y.

**GOVERNORS, HYDRAULIC TURBINE.**

Lombard Governor Co., Ashland, Mass.

**GOVERNORS OR REGULATORS, PUMP.**

Albany—Albany Steam Trap Co., Albany, N. Y.  
Allis-Chalmers Co., Milwaukee, Wis.  
Auld Co., Philadelphia, Pa.  
Bates—Edward P. Bates, Syracuse, N. Y.  
Belfield Co., H., Philadelphia, Pa.  
Berry—The Berry Engineering Co., Chester, Pa.  
Billow—National Supply Co., Chicago, Ill.  
Boardman—Locke Regulator Co., Salem, Mass.  
Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
Burrows—Burrows Mfg. Co., York, Pa.  
B-Y—Cleveland Feed Water Regulator Co., The, Cleveland, O.  
Cash Co., A. W., Decatur, Ill.  
Consolidated Mfg. & Supply Co., Pittsburgh, Pa.  
Copes—Northern Equipment Co., Erie, Pa.  
Curtis—Julian d'Este Co., Boston, Mass.  
Davis—G. M. Davis Regulator Co., Chicago, Ill.  
Dean Bros. Steam Pump Works, Indianapolis, Ind.  
Dunham—C. A. Dunham Co., Inc., Marshalltown, Ia.  
Eclipse—Illinois Engineering Co., Chicago, Ill.  
Economy—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
Eynon-Evans Mfg. Co., Philadelphia, Pa.  
♦ Fisher—The Fisher Governor Co., Marshalltown, Ia.  
Fleur de Lis—Boston Steam Specialty Co., Boston.  
Ford—Ford Regulator Corp., New York, N. Y.  
♦ Foster—Walworth Mfg. Co., Boston, Mass.  
Fulton—The Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.  
♦ Gardner Governor Co., The, Quincy, Ill.  
Garrett, W. D., & Co., New York.  
Heisley's—Central Machine Co., Philadelphia.  
Hennebelle Co., Chicago, Ill.  
Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
John Davis—Illinois Engineering Co., Chicago, Ill.  
Johnson—Johnson Service Co., Milwaukee, Wis.  
Kieley Steam Specialty Co., Chicago, Ill.  
K. & T.—Klippel Mfg. Co., Chicago, Ill.  
Kitts Mfg. Co., Oswego, N. Y.  
Little Giant—G. E. Witt Co., Inc., San Francisco, Cal.  
Locke—Lock Regulator Co., Salem, Mass.  
♦ Mason—Mason Regulator Co., Boston, Mass.  
McAlear Mfg. Co., The, Chicago, Ill.  
McDonough—McDonough Coal Saving Corp., Detroit, Mich.  
Monash—Monash-Younger Co., Chicago, Ill.  
Mueller—Kelley & Mueller, New York, N. Y.  
Murray—Wright-Austin Co., Detroit, Mich.  
Neco—Northern Equipment Co., Chicago, Ill.  
Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.  
Perfection—Chicago Engineers' Supply Co., Chicago.  
Perfection—Boylston Steam Specialty Co., Chicago, Ill.  
Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
Rochester Vacuum Valve Co., Rochester, N. Y.  
Ruggles-Klingemann Mfg. Co., Salem, Mass.  
"S-C" Regulator Mfg. Co., The, Fostoria, O.  
Schade—Schade Valve Mfg. Co., Philadelphia, Pa.  
Squires Genuine—The C. E. Squires Co., Cleveland, Ohio.  
Strong's—Strong, Carlisle & Hammond Co., Cleveland.  
Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
Utility—Standard Steam Specialty Co., New York.  
Waters—Waters Governor Co., Boston, Mass.  
Watson—Watson & McDaniel Co., Philadelphia, Pa.  
Watts Regulator Co., Lawrence, Mass.  
Williams—The Williams Gauge Co., Pittsburgh, Pa.  
Witts—G. E. Witt Co., Inc., San Francisco, Calif.  
Wood & Co., R. D., Philadelphia, Pa.  
Ziermore Regulator Co., Johnsonburg, Pa.

**GOVERNORS, VACUUM PUMP.**

- Bishop & Babcock Co., The, Cleveland, O.  
 Boylston—Boylston Steam Specialty Co., Chicago.  
 Davis Regulator Co., G. M., Chicago, Ill.  
 Dunham—C. A. Dunham, Inc., Chicago, Ill.  
 Fisher Governor Co., The, Marshalltown, Ia.  
 ♦ **Foster—Waltham Mfg. Co.**, Boston, Mass.  
 Kietey & Mueller, New York, N. Y.  
 Kitts Mfg. Co., Oswego, N. Y.  
 K. & T.—Kilpfel Mfg. Co., Chicago, Ill.  
 ♦ **Mason Regulator Co.**, Boston, Mass.  
 McAlear Mfg. Co., Chicago, Ill.  
 Monash—Monash Younger Co., Chicago, Ill.  
 Perfection—Western Kietey Steam Specialty Co., Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Schade—Schade Valve Mfg. Co., Philadelphia.  
 Witt's—G. E. Witt Co., Inc., San Francisco, Cal.

**GOVERNORS, WATER WHEEL.**

- Holyoke Machine Co., Worcester, Mass.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Pelton—Pelton Water Wheel Co., San Francisco, Cal.  
 Smith, S. Morgan, Co., York, Pa.  
 Woodward Governor Co., Rockford, Ill.

**GRADERS, ROAD.**

(See, also, "Machinery Road Making.")

- Adams—J. D. Adams & Co., Indianapolis, Ind.  
 ♦ **Keystone—Keystone Driller Co.**, Beaver Falls, Pa.  
 Dreadnought—The Baker Mfg. Co., Springfield, Ill.  
 Koehring—Koehring Machine Co., Milwaukee, Wis. (rotary).

**GRAPHITE.**

- Acheson Graphite Co., Niagara Falls, N. Y.  
 Asbury Graphite Mills, Asbury, N. J.  
 Bartley Graphite Products Co., Bartley, N. J.  
 Carbo-Graph—Hill & Griffith Co., Cincinnati, O.  
 Codd—Codd Tank & Specialty Co., Baltimore, Md.  
 Degrac—Detroit Graphite Co., Detroit, Mich.  
 Dixon Crucible Co., Joseph, Jersey City, N. J.  
 Federal Graphite Mills Co., Cleveland, O.  
 Hill's—John Hill Foundry Supply Co., Cincinnati, O.  
 Kelly—Kelly Graphite Mills, The, New York.  
 Kelly—T. P. Kelly & Co., Inc., New York, N. Y.  
 ♦ **Lunkenheimer Co.**, Cincinnati, O.  
 McCullough-Dalzell Crucible Co., Pittsburg, Pa.  
 ♦ **Motorflake & Superflake—Superior Flake Graphite Co.**, Chicago, Ill.

(FLAKE)	(AMORPHOUS)
<b>GRAPHITE</b>	
Lubricating Graphite Pipe Joint Compound	Boiler Graphite Graphite Grease Graphite Paint
<b>Superior Flake Graphite Co.</b>	
76 West Monroe St., Chicago, Ill.	
Warehouse,	Chicago, Ill.



- Oldag, Aquadag—Acheson Oldag Co., Port Huron, Mich.  
 Pacific Graphite Products Co., Seattle, Wash.  
 Pure Flake—The Henry Johnson Co., Jersey City, N. J.  
 Rosedale Foundry & Machine Co., Pittsburgh, Pa.  
 ♦ **United States Graphite Co.**, Saginaw, Mich.  
 Whiz—R. M. Hollingshead Co., Camden, N. J.

**GRAPHITE, BOILER.**

- Superflake—Superior Flake Graphite Co.**, Chicago, Ill.

**GRATES, CHAIN OR TRAVELING.**

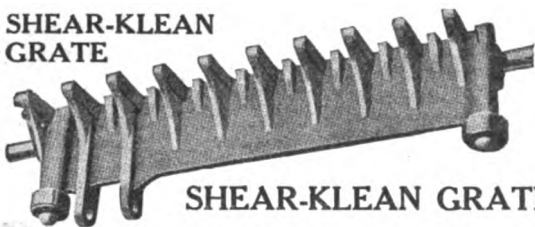
- Burke Furnace Co., Chicago, Ill.  
 Model-Chicago—Automatic Furnace Co., Dayton, Ohio.  
 Rosedale Foundry & Machine Co., Pittsburgh, Pa.

**GRATES AND GRATE BARS, STATIONARY.**

- A. C. Co.—Arnold-Creager Co., The, New London, Ohio (Kiln).  
 Abendroth Bros., Chester, N. Y.  
 ♦ **American Foundry & Mfg. Co.**, St. Louis, Mo.  
 American—American Stoker Co., New York (chain).  
 Barber Mfg. Co., The, Ashtabula, O.  
 Bass Foundry & Machine Co., Fort Wayne, Ind.  
 Baye—W. T. Bate & Son, Conshohocken, Pa.  
 Budd—The Budd Grate Co., Philadelphia, Pa.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Cokal—Cokal Stoker Co., Chicago.  
 Continental—Manistee Iron Works Co., Manistee, Mich. (chain).  
 Clark—H. W. Clark Co., Mattoon, Ill.  
 Cleveland Machinery & Supply Co., Cleveland, Tenn.  
 Codd—Codd Tank & Specialty Co., Baltimore, Md.

- Dean—Washburn & Granger, New York.  
 Dover Boiler Works, Dover, N. J.  
 Downey—T. F. Downey Boiler Works, Chicago, Ill.  
 Eddy Foundry Co., R. M., Chicago, Ill.  
 ♦ **Elkhart Special—Elkhart Iron Works**, Elkhart, Ind.  
 Elliptic—Thomas Grate Bar Co., Birmingham, Ala.  
 Farquhar Co., Ltd., A. B., New York, N. Y.  
 Fearson—Tillotson Foundry Co., Chicago, Ill.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 ♦ **Ferguson & Lange Foundry Co.**, Chicago, Ill.  
 Forbes, John R., Foundry & Iron Works, Jersey City, N. J.  
 Foster—Woburn Iron Foundry, Inc., Woburn, Mass.  
 Fox Hill—Ferguson, F. & Son, Hoboken, N. J.  
 Franklin Pipe & Foundry Co., Chicago, Ill.  
 Fritz Foundry & Machine Co., Geo. J., St. Louis, Mo.  
 Gainesville Foundry & Machine Works, Gainesville, Fla.  
 Gibson—Gibson Iron Works Co., Jersey City, N. J.  
 ♦ **Godfrey-Keeler Co.**, New York, N. Y.  
 Golden's Foundry & Machine Co., Columbus, O.  
 Gordon Hollow Blast Grate Co., Greenville, Mich.  
 Goyne—The Goyne Steam Pump Co., Ashland, Pa.  
 Great Western Mfg. Co., Leavenworth, Kan.  
 Greenwood Mfg. Co., Detroit, Mich.  
 Grieve—Combustion Engineering Co., New York.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Hartley Boiler Works, Montgomery, Ala.  
 Hawley Down Draft Furnace Co., Easton, Pa.  
 Heath Grate Bar Co., Boston, Mass.  
 Herbert Oscillating—The Herbert Boiler Co., Chicago.  
 ♦ **Herringbone—Valley Iron Works**, Williamsport, Pa.  
 ♦ **Hook Patent Kiln Co.**, Columbus, O.  
 ♦ **Hoosier—The Sinker-Davis Co.**, Indianapolis, Ind.  
 Huntsville Foundry & Machine Works, Huntsville, Ala.  
 Impervious—Thomas Grate Bar Co., Birmingham, Ala.  
 Improved Hot Blast—Traverse City Iron Works, Traverse City, Mich.  
 Indiana Foundry Co., Indiana, Pa.  
 ♦ **Kelly Foundry & Machine Co.**, Goshen, Ind.  
 Lake Erie Engineering Works, Buffalo, N. Y.  
 Lamy, A. & Son, Elizabeth, N. J.  
 Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
 ♦ **Machinery Company of America**, Big Rapids, Mich.  
 Marion Foundry Corp., Marion, O.  
 Marion Shear-Klean—Marion Machine Foundry & Supply Co., Marion, Ind.  
 McClave's, Beggs, Ellis-McClave—James Beggs & Co., New York, N. Y.  
 McDonald Foundry, Columbus, Ohio.  
 McKenzie Furnace Co., Chicago, Ill.  
 McNaughton—Beach Mfg. Co., Charlotte, Mich.  
 McNaughton—C. P. Bassett, Charlotte, Mich.  
 McNaughton—McNaughton Mfg. Co., Maryville, Tenn.  
 McNaull Boiler Mfg. Co., Toledo, O.  
 ♦ **Mahoney—Godfrey Keeler Co.**, New York, N. Y.  
 Meyer, Geo. J., Mfg. Co., Milwaukee, Wis.  
 Modern Iron Works, Quincy, Ill.  
 Munroe & Sons Mfg. Corp., R., Pittsburg, Pa.  
 National Fndry. Mfg. & Supply Co., Williamsport, Pa.  
 National Smokeless—New Albany Mfg. Co., New Albany, Ind.  
 New England Roller Grate Co., Indian Orchard, Mass.  
 Olyphant Foundry Co., Olyphant, Pa.  
 Peerless & Columbian—Stove & Range Co. of Pittsburgh, Pittsburgh, Pa.  
 Portland Co., Portland, Me.  
 Power Turbo Blower Co., New York.  
 Pyramid Grate Bar Co., New York.  
 Raleigh Iron Works Co., Raleigh, N. C.  
 Reed—The H. B. Smith Mfg. Co., Westfield, Mass.  
 Rosedale Foundry & Machine Co., Pittsburgh, Pa.  
 Rothe, Joseph, Green Bay, Wis.  
 Salamander—Salamander Grate Bar Co., New York.  
 Sampson—The English Iron Works Co., Kansas City, Kan.  
 Schofield's Sons Co., J. S., Macon, Ga.  
 ♦ **Sinker-Davis Co.**, The, Indianapolis, Ind.  
 South Bend Foundry Co., South Bend, Ind.  
 South Side Foundry & Machine Wks., Charleston, W. Va.  
 Star—McDonald Foundry, Columbus, Ohio.  
 Stowell Company, S. Milwaukee, Wis.  
 Stuart Foundry Co., Detroit, Mich.  
 Superior—Superior Iron Works Co., Superior, Mich.  
 Thomas, W. S. D.—Thomas Grate Bar Co., Birmingham, Ala.  
 Thomas Elliptic, Thomas Impervious—Thomas Grate Bar Co., Birmingham Ala. (rocker type).  
 Thompson—Richard Thompson & Co., New York, N. Y.  
 Thread Kill—M. H. Treadwell Co., New York, N. Y.  
 Toronto Foundry & Machine Co., Inc., Toronto, O.  
 Tread-Kill—Treadwell, M. H., Co., Inc., New York, N. Y.  
 ♦ **Tupper—Valley Iron Wks.**, Williamsport, Pa.  
 Twin Fire Furnace Co., Chicago, Ill.  
 Valley Machine Co., Parkersburg, W. Va.  
 Vulcan Iron Works Co., Toledo, O.  
 Walsh & Weidner Boiler Co., The, Chattanooga, Tenn.  
 ♦ **Welskittel, A. & Son Co.**, Baltimore, Md.  
 White—The Steam Appliance Co., West Allis, Wis.



**SHEAR-KLEAN  
GRATE****SHEAR-KLEAN GRATE CO.,****809 Monadnock Bldg.,****CHICAGO**

The roller on bar moves on a cam fastened to the side frame which throws bar to right and left when shaken. This in addition to the up and down motion. This creates a shearing and cleaning action eliminating clinker and ash. Reduces cleaning periods to a minimum. Makes boilers more efficient. Will give efficiency with anything called coal, burning good or bad equally well. Gives CO-2 combustion.

**GRATES, GAS.**

(See, also, "Heaters, Fire Place.")

**Fire King—A. Weiskittel & Son Co.,** Baltimore, Md.  
**Penn Burner & Mfg. Co.,** Pittsburgh, Pa.

**GRATES, KILN, FOR BRICK, TILE, SEWER PIPE  
AND POTTERY.**

**Canton—Canton Grate Co.,** Canton, O.

**GRATES FOR PLUMBING WORK.**

(See "Strainers.")

**GRATES, SEWER.**

**American Foundry & Mfg. Co.,** St. Louis, Mo.  
**Bee Hive—Iowa Foundry & Mfg. Co.,** Ft. Dodge, Iowa.  
**Canton Foundry & Machine Co.,** The, Canton, O.  
**Jones Hollow Ware Co.,** Baltimore, Md.  
**Kupferle, John C., Foundry Co.,** St. Louis, Mo.  
**Mott Iron Works, The J. L.,** Trenton, N. J.  
**South Bend Foundry Co.,** South Bend, Ind.  
**Valley Machine Co.,** Parkersburg, W. Va.

**GRATES, SHAKING, DUMPING AND ROCKING.**

(See also "Stokers, Mechanical.")

**Aetna—Kewanee Boiler Co.,** Kewanee, Ill. (shaking).  
♦ **Ajax—Valley Iron Works,** Williamsport, Pa.  
**Albany, Coe—Thacher Propeller & Foundry Corp.,** Albany, N. Y.  
**Armstrong—Armstrong Mfg. Co.,** Springfield, O.  
**Bass Foundry & Machine Co.,** Fort Wayne, Ind.  
**Brunswick—Brunswick Refrigerating Co.,** The, New Brunswick, N. J.  
**Budd Grate Co.,** Philadelphia, Pa.  
**Burke Furnace Co.,** Chicago, Ill.  
**Cahill—Chattanooga Roofing & Fdy. Co.,** Chattanooga, Tenn.  
**Canton—Canton Grate Co.,** Canton, O.  
**Casey-Hedges Co.,** The, Chattanooga, Tenn.  
**Century—Kewanee Boiler Co.,** Kewanee, Ill. (rocking).  
**Coe—Nute, McGehee, Geary Co.,** Chambersburg, Pa.  
**Common Sense, Zig Zag—Barnes Foundry Co.,** Jersey City, N. J.  
**Culver—Automatic Furnace Co.,** The, Dayton, Ohio.  
**Cyclone—Cyclone Grate Bar Co.,** Buffalo, N. Y.  
**Dean—Washburn & Granger,** New York, N. Y.  
**Dillon, D. M.,** Steam Boiler Works, Fitchburg, Mass.  
**Downey—T. F. Downey Boiler Works,** Chicago, Ill.  
**Elkhart No. 9—Elkhart Iron Works,** Elkhart, Ind.  
**Ellis-McClave—James Beggs & Co.,** New York, N. Y.  
**Foster—Woburn Iron Foundry, Inc.,** Woburn, Mass.  
**Frost, Mfg. Co.,** Galesburg, Ill.  
**Gardner—Gardner Grate Co.,** Boston, Mass.  
**Grieve—Combustion Engineering Co.,** New York, N. Y.  
**Gulickson—Geo. Gulickson,** Chicago, Ill.  
**Hafer—Nute, McGehee, Geary Co.,** Chambersburg, Pa.  
**Herrick, George S.,** Syracuse, N. Y.  
♦ **Hoosier—The Sinker-Davis Co.,** Indianapolis, Ind.  
**Hulson—Hulson Grate Co.,** Keokuk, Ia.  
**Kelly Foundry & Machine Co.,** Goshen, Ind.  
**Kelly—The Milwaukee Boiler Co.,** Milwaukee, Wis.  
**Lo. Co., McGinty—Kramer Bros. Foundry Co.,** The, Dayton, O.  
**MacDonald—International Engineering Wks., Inc.,** Framingham, Mass.  
**Mahoney—Godfrey-Keebler Co.,** New York, N. Y.  
**Marion Interlocking, Marion Rucker—Marion Machine Foundry & Supply Co.,** Marion, Ind.  
**Martin Grate Co.,** Chicago, Ill.  
**McClave—McClave-Brooks Co.,** Scranton, Pa.  
**McKenzie Furnace Co.,** Chicago, Ill.  
**McNaughton—McNaughton Mfg. Co.,** Maryville, Tenn.  
**Milwaukee Boiler Mfg. Co.,** The, Milwaukee, Wis.  
**Morse—E. F. Morse Co.,** Providence, R. I.  
**Murray—Murray Iron Works Co.,** Burlington, Ia.  
**National Foundry Mfg. & Supply Co.,** Williamsport, Pa.  
**Neemes Bros.,** Troy, N. Y.  
**New England Roller Grate Co.,** Indian Orchard, Mass.  
**Patch—Futrell Coupler Co.,** Streator, Ill.  
**Peerless—James McMillan & Co.,** Chicago, Ill.  
**Perfection Grate & Supply Co.,** Springfield, Mass.  
**Pittsburgh—Rosedale Foundry & Machine Co.,** Pittsburgh, Pa.

**Power Efficiency Corp.,** Buffalo, N. Y.  
**Prentice—L. H. Prentice Co.,** Chicago.  
**Quinn & Co.,** Cincinnati, Ohio.  
**R. T. & Co.—Richard Thompson & Co.,** New York.  
**Scranton—Scranton Pump Co.,** Scranton, Pa.  
**Scottdale Grates—Marion Machine Foundry & Supply Co.,** Marion, Ind.  
**Shear Klean—Shear Klean Grate Co.,** Chicago, Ill.  
**Torrid—Alonzo Hoover & Son, Hackettstown, N. J.**  
**Travis, G. E.,** Henry, Ill.  
**20th Century—Richard Thompson & Co.,** New York, N. Y.  
**20th Century—Twin Fire Furnace Co.,** Chicago, Ill.  
**20th Century—Water-Arch Furnace Co.,** Chicago.  
**U. S.—John J. Moroney & Co.,** Chicago, Ill.  
**U. S.—United States Rocking Grate Bar Co.,** Chicago, Ill.  
**Walsh & Weldner Boiler Co.,** The, Chattanooga, Tenn.

**GRATES, WATER.**

**National & Shelby—National Tube Co.,** Pittsburg, Pa.

**GREASE, DROP FORGE, DIE SWABBING.**

**Swan & Finch Co.,** New York, N. Y.

**GREASE, GEAR AND PINION.**

**Acme—Acme Petroleum Products Co.,** Cleveland, O.  
**Bull Dog—Indian Refining Co., Inc.,** New York.  
**En-Ar-Co—National Refining Co.,** Cleveland, O.  
**Gearese—Swan & Finch Co.,** New York, N. Y.  
**Fiske's Crystal Twister—Fiske Brothers Refining Co.,** New York, N. Y.  
**Schaeffer Bros. & Powell Mfg. Co.,** St. Louis, Mo.  
**Standard—Standard Chemical Corp.,** Kalamazoo, Mich.  
**Stixo—Acme Refining Co.,** Cleveland, O.  
**Texaco Crater Compound—The Texas Co.,** New York, N. Y.  
**Waverly—Waverly Oil Works Co.,** Pittsburg, Pa.  
**Whitmore's—Whitmore Mfg. Co.,** The, Cleveland, O.  
**Wood, W. A. Co.,** Boston, Mass.  
**Zero Oil Co.,** Parkersburg, W. Va.

**GREASES, GRAPHITE.**

**Superflake—Superior Flake Graphite Co.,** Chicago, Ill.  
♦ **United States Graphite Co.,** Saginaw, Mich.

**GREASE, LUBRICATING.**

(See also "Graphite" and "Lubricants.")

**Acheson Graphite—International Acheson Graphite Co.,** Niagara Falls.  
**Acorn—Corning Oil Co., Inc.,** New York, N. Y.  
♦ **Alroilene—Chicago Pneumatic Tool Co.,** New York.  
**Alpha—Albany Lubricating Co.,** New York.  
**Albion—Albion Mfg. Co.,** Seattle, Wash.  
**American—American Oil Corp.,** Jackson, Mich.  
**American Oil Products Co.,** Buffalo, N. Y.  
**American Oil Refining Co.,** Chicago, Ill.  
**Amolico—American Oil Corp.,** Jackson, Mich.  
**Aquadag—Acheson Oil & Gas Co.,** Port Huron, Mich.  
**Arctic—Standard Oil Co.,** New York.  
**Asbestese (wool mixed)—Swan & Finch Co.,** New York, N. Y.  
**Asbury Graphite Mills,** Asbury, N. J.  
**Atkinson—Economy Lubricating Co.,** Boston, Mass.  
**Atlas—Swan & Finch Co.,** New York, N. Y.  
**Badger-Wadhams Oil Co.,** Milwaukee, Wis.  
**Bay State—W. A. Wood Co.,** Boston, Mass.  
**Baum's—Baum's Castorine Co.,** Rome, N. Y.  
**Blake Co.,** W. L., Portland, Me.  
**Buffalo Oil & Compound Co.,** Buffalo, N. Y.  
**Cascade, Claypool, Bison—Swan & Finch Co.,** New York, N. Y.  
**Chard & Howe,** New York, N. Y.  
**Chelsea—Chelsea Oil & Supply Co.,** New York, N. Y.  
**Climax—Daniel Mahoney & Sons, Commercial Oil Co.,** Buffalo, N. Y.  
**Cincinnati Oil Works,** Cincinnati, O.  
**Crane's—Crane, James W., Co., Inc.,** Brooklyn, N. Y.  
**Cupese—Swan & Finch Co.,** New York, N. Y.  
**Curra—Curry Brothers Oil Co.,** Boston, Mass.  
**Damascus—Damascus Mfg. Co.,** Cleveland, Ohio.  
**Detroit—White Star Refining Co.,** Detroit, Mich.  
**Dixon Crucible Co.,** Joseph, Jersey City, N. J.  
**Duplex—Enterprise Oil Company,** Buffalo, N. Y.

**GRAPHITE GREASE**

—FOR EVERY USE—

Lubricating Graphite  
Pipe Joint CompoundBoiler Graphite  
Graphite Paint**Superior Flake Graphite Co.**76 West Monroe St., Chicago, Ill.  
Warehouse, Chicago, Ill.

Ebonite—Bayerson Oil Works, Erie, Pa.  
 Economy Oil Co., Chicago, Ill.  
 En-Ar-Co.—National Refining Co., The, Cleveland, Ohio.  
 Ensign Refining Co., The, Cleveland, O.  
 Enterprise—Duplex Liquid—Enterprise Oil Company, Buffalo, N. Y.  
 Excelsior—John M. Watts Sons, Philadelphia, Pa.  
 Farmer Allerton—Warren Lubricant Co., Buffalo, N. Y.  
 Fiske's, Climax, Phoenix—Fiske Bros. Refining Co., New York, N. Y.  
 Franklin—Franklin Oil & Gas Co., Bedford, O.  
 Galena Signal Oil Co., Franklin, Pa.  
 Gearcase (for gears)—Swan & Finch Co., New York, N. Y.  
 Gear-Kote—Metaline Chemical Co., Cleveland, O.  
 Greoll—Wm. C. Robinson & Son Co., Baltimore, Md.  
 Great Western Oil Co., The, Cleveland, O.  
 Gredag—Acheson Graphite Co., Niagara Falls, N. Y.  
 Harris—A. W. Harris Oil Co., Providence, R. I.  
 Havoline, Indian—Indian Refining Co., New York City.  
 Hercules—Phoenix Oil Co., Cleveland, O.  
 Keysol—Keystone Oil & Mfg. Co., Chicago, Ill.  
 Houghton, E. F., & Co., Philadelphia, Pa.  
 Indiana Refining Co., New York, N. Y.  
 International Acheson Graphite Co., Niagara Falls, N. Y.  
 Kasson—Enterprise Oil Co., Buffalo, N. Y.  
 Kelly Graphite Mills, New York, N. Y.  
 Keystone Grease—Keystone Lubricating Co., Philadelphia, Pa.  
 Lubriko Co., The, Philadelphia, Pa.  
 Lubriko—Commercial Lubricating Co., Philadelphia, Pa.  
 Lubron Co., The, Everett, Mass. Trade names—Lubron, Diamond, Knowlton, Wakelee.  
 Mica—Standard Oil Co., of New York, New York.  
 Mobiloils—Vacuum Oil Co., New York.  
 Monarch Mfg. Co., Council Bluffs, Iowa.  
 Moore Oil Refining Co., Cincinnati, O.  
 Muskogee Refining Co., Muskogee, Okla.  
 New York & New Jersey Lubricant Co., New York, N. Y.  
 Nun-bet-er—S. W. Davis Oil Co., Providence, R. I.  
 Ohio—The Ohio Grease Co., Loudonville, O.  
 Oilzum—White & Bagley Co., Worcester, Mass.  
 Oklahoma Producing & Refining Corporation of America, Muskogee, Okla.  
 Panhard—Panhard Oil Corp., New York, N. Y.  
 Perfecto—Warren Lubricant Co., New York, N. Y.  
 Perfectus, Supremus—International Lubricating Co., Ltd., Evanston, Ill.  
 Philadelphia Grease Mfg. Co., The, Philadelphia, Pa.  
 Phoenix Fiske's, Climax—Fiske Bros. Refining Co., New York, N. Y.  
 P. L. C.—Patterson Lubricating Co., Boston, Mass.  
 Polarine—Standard Oil Co., New York, N. Y.  
 Power—Buck & Co., Inc., E. A., Willimantic, Conn.  
 Premier—Standard Oil Co., New York.  
 Quaker State—Phinney Bros. Co., Oil City, Pa.  
 Quaker State—The Star Oil Co., Chicago, Ill.  
 Red Seal—Cherry Chemical Co., The, Philadelphia.  
 Robins Conveying Belt Co., New York.  
 Rock Brand—Magie Bros., Chicago, Ill.  
 ♦ Rollerline—Roversford Fdy. & Machinery Co., Philadelphia, Pa.  
 Run-Better—Providence Oil Co., Providence, R. I.  
 Safeguard—William T. Baker, Inc., Jersey City, N. J.  
 Sanderson—Warren Lubricant Co., Buffalo, N. Y.  
 Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.  
 S. K. F.—S. K. F. Ball Bearing Co., New York, N. Y.  
 Shield—The Ironsides Co., Columbus, O.  
 Sonneborn Sons, Inc., L., New York, N. Y.  
 Spermo—Warren Lubricant Co., Buffalo, N. Y.  
 ♦ Sponge Grease—Warren Lubricant Co., Buffalo, N. Y.  
 Superba—Curry Brothers Oil Co., Boston, Mass.  
 Superior Flake Graphite Co., Chicago, Ill.  
 Supreme—Gulf Refining Co., Pittsburgh, Pa.  
 Swan & Finch Co., New York. Trade names, Calypsol, Exese, Monarch, Plumbago, Petro, Tiger D, Vesuvene, Victor.  
 Swastika—McLean-Jones Oil & Supply Co., Inc., Boston, Mass.  
 Texaco—The Texas Co., New York, N. Y.  
 Tiona—Warren Lubricant Co., Buffalo, N. Y. (axle).  
 Union Oil Works, Erie, Pa.  
 Unity—Curry Brothers Oil Co., Boston, Mass.  
 Universal—Warren Lubricant Co., Buffalo, N. Y.

♦ U. S. G. Co.—United States Graphite Co., Saginaw, Mich.  
 Vacuum Oil Co., New York, N. Y.  
 Warleys—Thos. C. Warley & Co., Philadelphia.  
 Warren & Bailey Mfg. Co., Los Angeles, Cal.  
 Waverly—Waverly Oil Works Co., Pittsburg, Pa.  
 White Circle—Van Nostrand Mfg. Co., New York.  
 White Rose—Crane, James W., Co., Inc., Brooklyn.  
 Whiz—Hollingshead Co., R. M., Camden, N. J.  
 Williams, R. A. & M. L., Cleveland, O.  
 World Refining Co., The, Easton, Pa.  
 Zero—Daniel Mahoney & Son Commercial Oil Co., Buffalo, N. Y.  
 Zero Oil Co., Parkersburg, W. Va. (Axle, Cup & Transmission).  
 Zerola—Metaline Chemical Co., Cleveland, O.  
 Zibell, J. A., Co., New York, N. Y.

**GREENHOUSES.**

American Greenhouse Mfg. Co., Chicago, Ill.  
 Bickelhaupt Skylight Work, New York, N. Y.  
 Dietsch, A., Co., Chicago, Ill.  
 Foley Greenhouse Mfg. Co., Chicago, Ill.  
 Hitchings & Co., Elizabeth, N. J.  
 Ickes—Braun Mill Co., Chicago, Ill.  
 Jacobs, S., & Sons, Brooklyn, N. Y.  
 King Construction Co., North Tonawanda, N. Y.  
 Lutton, Wm. H., Co., Jersey City, N. J.  
 Pierson U-Bar Co., New York, N. Y.  
 Van Assache, Frank, Jersey City, N. J.

**GRENADES, HAND.**

Hayward & Co., S. F., New York, N. Y. (fire).

**GRINDERS, AERIAL.**

Cincinnati Electrical Tool Co., The, Cincinnati, O.  
 Van Dorn Electric Tool Co., Cleveland, O.

**GRINDERS, AUTOMATIC AND SEMI-AUTOMATIC.**

Fraser—Warren F. Fraser Co., Westboro, Mass.  
 Hawes, C. L., Ashtabula, O. (small).  
 Stecher, Chas., Co., The, Chicago, Ill.

**GRINDERS, BENCH.**

Athol Machine Co., Athol, Mass.  
 Blount, J. G., Co., Everett, Mass.  
 Builders Iron Foundry, Providence, R. I.  
 Carr, Joseph, Co., Philadelphia, Pa.  
 Carver—American Electric Tool Co., West Newton, Mass.  
 Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Cortland, King—Cortland Grinding Wheel Corp., Cortland, N. Y.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Cutler & Wood Supply Co., Boston, Mass.  
 Diamond Machine Co., Providence, R. I.  
 ♦ Little Giant—Chicago Pneumatic Tool Co., New York.  
 Goodell-Pratt Co., Greenfield, Wis.  
 Haskins—R. G. Haskins Co., Chicago, Ill.  
 Hisey-Wolf Machine Co., Cincinnati, O.  
 Ideal—Neil & Smith Electric Tool Co., The, Cincinnati, O.  
 Kerrihard Co., Red Oak, Iowa.  
 La Salle No. 1—La Salle Machine & Tool Co., La Salle, Ill.  
 Luther Grinder Mfg. Co., Milwaukee, Wis.  
 Marschke Mfg. Co., Indianapolis, Ind.  
 Moak Machine & Tool Co., Port Huron, Mich.  
 Norton—Norton Co., Worcester, Mass.  
 ♦ Partridge—E. O. Partridge, Chicago, Ill.  
 Pullman Ventilator & Mfg. Co., York, Pa.  
 Racine Universal Motor Co., Chicago, Ill. (small).  
 Ransom Mfg. Co., Oshkosh, Wis.  
 Sellow Machine Tool Co., Pawtucket, R. I.  
 ♦ Sterling—Sterling Grinding Wheel Co., Tiffin, O.  
 St. Louis Machine Tool Co., St. Louis, Mo.  
 Stow Manufacturing Co., Inc., Binghamton, N. Y.  
 Temco Electric Motor Co., Leipsic, Ohio.  
 U. S. Electrical Mfg. Co., Los Angeles, Calif.  
 ♦ United States Electrical Tool Co., Cincinnati, Ohio.  
 Up-To-Date Tool Co., South Boston, Mass.  
 Valley City Machine Wks., Grand Rapids, Mich.  
 Van Dorn Electric Tool Co., Cleveland, O.  
 Walker, O. S., & Co., Worcester, Mass.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.

**GRINDERS, CAR WHEEL.**

Putman Machine Co., Fitchburg, Mass.  
 Q. M. S.—Hanna Engineering Works, Chicago, Ill.  
 Q-M-S—Vulcan Engineering Sales Co., Chicago, Ill.

**GRINDERS, CASTING.**

Manhattan Machine & Tool Works, Grand Rapids, Mich.  
 Grand Rapids Grinding Machine Co., Grand Rapids, Mich.

**GRINDERS, CENTRE.**

American—Diamond Machine Co., Providence, R. I.  
 Builders' Iron Foundry, Providence, R. I.



Carver—American Electric Tool Co., West Newton, Mass.  
 Coates—Coates Clipper Mfg. Co., Worcester, Mass.  
 Greenfield Machine Co., Greenfield, Mass.  
 Heald Machine Co., Worcester, Mass.  
 Ideal—Neil & Smith Electric Tool Co., The, Cincinnati, O.  
 Mueller Machine Tool Co., Cincinnati, O.  
 Niles-Bement-Pond Co., New York.  
 ♦ U. S. Electrical Tool Co., Cincinnati, O.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.

**GRINDERS, CENTERLESS.**

Sanford—F. C. Sanford Mfg. Co., Bridgeport, Conn.

**GRINDERS, CHASER.**

♦ Geometric—Geometric Tool Co., New Haven, Conn.  
 Modern—Modern Tool Co., Erie, Pa.  
 Namco—National Acme Co., The, Cleveland, O.  
 Rickert-Shafer—Rickert-Shafer Co., Erie, Pa.

**GRINDERS, CHISEL.**

American—American Grinder Mfg. Co., Milwaukee, Wis.  
 Millers Falls, New York, N. Y.  
 Stearns, E. C., & Co., Syracuse, N. Y.

**GRINDERS, CHUCKING**

Bryant—Bryant Chucking Grinder Co., Springfield, Vt.  
 Security Tool Works, Chicago, Ill.

**GRINDERS, COCK.**

Automatic Valve Grinding Machine Co., Knoxville, Tenn.  
 Bordons & Oliver, Cleveland, O.  
 Turner Machine Co., Philadelphia.  
 Warner & Swasey Co., Cleveland, O.

**GRINDERS, COMMUTATOR TRUING.**

Jordan—Jordan Bros., Inc., New York, N. Y.  
 Shafer-Decker Co., Rochester, N. Y.

**GRINDERS, CRANE AND RADIAL SWING (FOR GRINDING HEAVY CASTING).**

Mummert-Dixon Co., Hanover, Pa.  
 Rivett Lathe & Grinder Co., Boston, Mass.

**GRINDERS, CRANKSHAFT.**

Cincinnati Grinder Co., Cincinnati, O.  
 Landis Tool Co., Waynesboro, Pa.  
 McDonough Mfg. Co., Eau Claire, Wis.

**GRINDERS, CUTTER AND REAMER.**

Barnes—Wm. O. Barnes, Leominster, Mass.  
 Becker Milling Machine Co., Hyde Park, Mass.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Gear Cutting Machine Co., The, Cincinnati, O.  
 Cincinnati Milling Mach. Co., Cincinnati, O.  
 Fenn Mfg. Co., Hartford, Conn.  
 ♦ Fischer—Fischer Machine Works, Philadelphia, Pa.  
 Garvin Machine Co., The, New York, N. Y.  
 Gould & Eberhardt, Newark, N. J.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 ♦ Grand Rapids Grinding Machine Co., Grand Rapids, Mich.  
 Harris Automatic—Harris Engineering Co., Bridgeport, Conn.  
 Heald Machine Co., Worcester, Mass.  
 Ingersoll Milling Machine Co., The, Rockford, Ill.  
 Keller Mechanical Engraving Co., Brooklyn, N. Y.  
 Le Blond—Le Blond Machine Tool Co., The, R. K., Cincinnati, O.  
 Modern Tool Co., Erie, Pa.  
 Modern Tool & Machine Works, Inc., Newark, N. J.  
 ♦ Murchey Machine & Tool Co., Detroit.  
 New Yankee—Willmarth & Morman Co., Grand Rapids.  
 Niles-Bement-Pond Co., New York.  
 ♦ Norton—Norton Co., Worcester, Mass.  
 Oakley—Oakley Machine Tool Co., Cincinnati, O.  
 Ohio—Oesterlein Machine Co., The, Cincinnati, O.  
 Pratt & Whitney Co., Hartford, Conn.  
 Rivett Lathe Mfg. Co., Boston, Mass.  
 Robbins, Gamwell & Co., Pittsfield, Mass.  
 Sterling Universal—McDonough Mfg. Co., Eau Claire, Wis.  
 Wells, F. E., & Son Co., Greenfield, Mass.  
 Woods Engineering Co., The, Alliance, O.

**GRINDERS, CYLINDER.**

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Grinder Co., Cincinnati, O.  
 Greenfield—Greenfield Machine Co., Greenfield, Mass.  
 Heald—Heald Machine Co., The, Worcester, Mass.  
 Landis Tool Co., Waynesboro, Pa.  
 Madison—Madison Machine Tool Co., Madison, Wis.  
 Manning, Maxwell & Moore, Inc., New York, N. Y.  
 Morse Twist Drill & Mach. Co., New Bedford, Mass.

New Britain Machine Tool Co., New Britain, Conn.  
 Queen City—Queen City Machine Tool Co., Cincinnati, O.  
 Sanford—E. C. Sanford Mfg. Co., Bridgeport, Conn.  
 Whitney, Baxter D., & Son., Inc., Winchendon, Mass.

**GRINDERS, CYLINDRICAL.**

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Detroit Centerless—Detroit Machine Tool Co., Detroit, Mich.  
 Fraser—Warren F. Fraser Co., Westboro, Mass.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.  
 McDonough Mfg. Co., Eau Claire, Wis.  
 Modern Tool Co., Erie, Pa.  
 ♦ United States Electrical Tool Co., Cincinnati, O.  
 Webster & Perks Tool Co., Springfield, O.

**GRINDERS, DIE AND GAGE.**

New Yankee—Willmarth & Morman Co., Grand Rapids, Mich.

**GRINDERS, DISC.**

Badger—Badger Tool Co., Beloit, Wis.  
 Bass Bros., New York, N. Y.  
 Bealy, Charles H., & Co., Chicago, Ill.  
 Bryant Chucking Grinder Co., Springfield, Vt.  
 Builders' Iron Foundry, Providence, R. I.  
 ♦ Crescent Machine Co., The, Leontia, O.  
 Diamond Machine Co., Providence, R. I.  
 Fry, B. L. Mfg. Co., St. Louis, Mo.  
 Globe Inventing Co., Chicago, Ill. (Metal Cutter and Saw Table Combined, Printers).  
 Gorton—Diamond Machine Co., Providence, R. I.  
 Heald Machine Co., Worcester, Mass.  
 Hoysradt & Case, Kingston, N. Y.  
 Modern Pattern & Machine Co., Detroit, Mich.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Pioneer—Carter & Buchholz Co., Inc., Syracuse, N. Y.  
 Reeves—Gardner Machine Co., Beloit, Wis.  
 Rowbottom Machine Co., Waterbury, Conn.  
 Safety Emery Wheel Co., Springfield, O.  
 Sellow Machine Tool Co., Pawtucket, R. I.  
 Valley City Machine Works, Grand Rapids, Mich.  
 Walls—T. P. Walls Tool & Supply Co., New York, N. Y.

**GRINDERS, DRILL.**

Hex—Detroit Hexagon Drill Co., Detroit, Mich.  
 New Yankee—Willmarth & Morman Co., Grand Rapids, Mich.

**GRINDERS, ELECTRIC, BENCH AND FLOOR.**

(See also "Grinders, Tool")

Bridgeport—The Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.  
 Cincinnati Electrical Tool Co., Cincinnati, Ohio.  
 Columbia Mfg. Co., Belleville, Ill.  
 Hisey—Hisey-Wolf Machine Co., Cincinnati, Ohio.  
 Janette Mfg. Co., Chicago, Ill.  
 Luther Grinder Mfg. Co., Milwaukee, Wis.  
 Rochester Electric Products Corp., Rochester, N. Y.  
 Temco Electric Motor Co., The, Leipsic, O.  
 U. S. Electrical Tool Co., The, Cincinnati, O.  
 Van Dorn—Van Dorn Electrical Tool Co., Cleveland, O.  
 Wodack Electric Tool Co., Chicago, Ill.

**GRINDERS, EMERY.**

(See "Grinders, Tool.")

**GRINDERS, EMERY BAND.**

Simplex—T. P. Walls Tool & Supply Co., New York, N. Y.

**GRINDERS OR MILLS, FEED AND MEAL.**

(See "Mills, Feed and Meal.")

**GRINDERS, GUIDE BAR.**

Tanite Co., The, Stroudsburg, Pa.

**GRINDERS, HOLE AND FACE.**

Bryant Chucking Grinder Co., Springfield, Vt.  
 Cleveland Machine Tool Co., Cleveland, Ohio.

**GRINDERS, HUB.**

Cleveland Machine Tool Co., Cleveland, Ohio.

**GRINDERS, INTERNAL.**

Arter—Persons-Arter Machine Co., Worcester, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Bryant Chucking Grinder Co., Springfield, Vt.  
 Capital—Lansing Stamping & Tool Co., Lansing, Mich.  
 Cincinnati—Cincinnati Grinder Co., Cincinnati, O.  
 Fraser—Warren F. Fraser Co., Westboro, Mass.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Heald—The Heald Machine Co., Worcester, Mass.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.

Landis Machine Co., Waynesboro, Pa.  
 Micro-Schmidt, B. L. Co., Davenport, Iowa.  
 Modern Tool Co., Erie, Pa.  
 Ott Grinder Co., Indianapolis, Ind.  
 Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
 Van Norman Machine Tool Co., Springfield, Mass.  
 Waltham Machine Works, Waltham, Mass.

**GRINDERS, KNIFE.**

Appleton Mfg. Co., Batavia, Ill.  
 Bridgeport Safety Emery Wheel Co., Inc., Bridgeport, Conn.  
 Capital—Lansing Stamping & Tool Co., Lansing Mich.  
 Champion—American Grinder Mfg. Co., Milwaukee, Wis.  
 Coe Mfg. Co., The, Painesville, Ohio.  
 Eagle—Rogers Eagle Machine Wks., Buffalo, N. Y.  
 Kline, Lewis T., Alpena, Mich.  
 ♦ Machinery Co. of America, Big Rapids, Mich.  
 Mummert-Dixon Co., Hanover, Pa.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Quicksnap—Stockbridge Machine Co., Worcester, Mass.  
 Rogers-Buffalo—Rogers & Co., S. C., Buffalo, N. Y.  
 Rowbottom Machine Co., Waterbury, Conn.  
 Safety Emery Wheel Co., Springfield, O.  
 Springfield Mfg. Co., Bridgeport, Conn.  
 Tinker, F. & Sons, Co., Pittsburgh, Pa.  
 Wardwell Mfg. Co., Cleveland, O. (portable electric).  
 Woods, S. A., Machine Co., Boston, Mass.

**GRINDERS, LAWN MOWER.**

Ideal, Peerless—Fate-Root-Heath Co., Plymouth, O.  
 Osborne Mfg. Co., Cleveland, O.

**GRINDERS, LIMESTONE.**

William Patent Crusher & Pulverizer Co., St. Louis, Mo.

**GRINDERS, LOCOMOTIVE LINK.**

Newton Machine Tool Works, Inc., Philadelphia, Pa.

**GRINDERS, OILSTONE.**

Mummert-Dixon Co., Hanover, Pa.  
 Oliver Machinery Co., Grand Rapids, Mich.

**GRINDERS, PATTERNMAKERS.**

Gardner Machine Co., Beloit, Wis.

**GRINDERS, PISTON RING.**

Arter—Persons-Arter Machine Co., Worcester, Mass.  
 Walker, O. S., Co., Worcester, Mass.

**GRINDERS, PNEUMATIC.**

(See "Tools, Pneumatic.")

**GRINDERS, PORTABLE, ELECTRIC AND FLEXIBLE SHAFT.**

Black & Decker Mfg. Co., Baltimore, Md. (Valve).  
 Bodine—Bodine Electric Co., Chicago, Ill.  
 Carver—American Electric Tool Co., West Newton, Mass.  
 ♦ Chicago General Purpose Machine—Chicago Flexible Shaft Co., Chicago, Ill.  
 Cincinnati Electric Tool Co., Cincinnati, O.  
 Coates—Coates Clipper Mfg. Co., Worcester, Mass.  
 Dumore—Wisconsin Electric Co., Racine, Wis.  
 ♦ Duntley—Chicago Pneumatic Tool Co., Chicago.  
 Electric Blower Co., Boston, Mass.  
 Electro-Magnetic Tool Co., Chicago, Ill.  
 Forbes & Myers, Worcester, Mass.  
 General Electric Co., Schenectady, N. Y.  
 Hamilton-Beach—Hamilton-Beach Mfg. Co., Racine, Wis.  
 Harrington, E. Son & Co., Philadelphia, Pa.  
 Haskins—R. G. Haskins Co., Chicago, Ill.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.  
 Ideal—Neil & Smith Electric Tool Co., The, Cincinnati, O.  
 Independent Pneumatic Tool Co., Chicago, Ill.  
 Kimble Electric Co., Chicago, Ill.  
 ♦ Little Giant, Universal—Chicago Pneumatic Tool Co., New York.  
 Peerless—Cincinnati Electric Tool Co., Cincinnati, O.  
 Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Ransom Mfg. Co., Oshkosh, Wis.  
 Simplex Mfg. Co., Newtonville, Mass.  
 Standard Electric Tool Co., Cincinnati, O.  
 Stow Mfg. Co., Binghamton, N. Y.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Strand, N. A., & Co., Chicago, Ill.  
 ♦ U. S. Electrical Tool Co., Cincinnati, O.  
 ♦ Van Dorn—Van Dorn Electric Tool Co., Cleveland, O.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Wodack—Wodack Electric Tool Corp., Chicago, Ill.

**GRINDERS, PRECISION.**

Precision & Thread Grinder Mfg. Co., Philadelphia, Pa.

**GRINDERS, RADIATOR.**

Mummert-Dixon Co., Hanover, Pa.

**GRINDERS, RESIN.**

Sly, W. W., Mfg. Co., Cleveland, O.

**GRINDERS, RING WHEEL.**

Besly—Charles H. Besly & Co., Chicago, Ill.

**GRINDERS, ROLL.**

Farrell Foundry & Machine Co., Ansonia, Conn.  
 Harrington, E. Son & Co., Philadelphia, Pa.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.  
 Ideal—Neil & Smith Electric Tool Co., The, Cincinnati, O.  
 ♦ Nordyke & Morman Co., Indianapolis, Ind.  
 Reeves—Gardner Machine Co., Beloit, Wis.  
 Springfield Mfg. Co., The, Bridgeport, Conn.

**GRINDERS, SAND.**

Tropenas Co., Brooklyn, N. Y.

**GRINDERS, SURFACE.**

Arter—Persons-Arter Machine Co., Worcester, Mass.  
 Abrasive Machine Tool Co., E. Providence, R. I.  
 Besly, Charles H. & Co., Chicago, Ill.  
 Binns Machine Co., Newark, N. J.  
 Blake & Johnson Co., Waterbury, Conn.  
 Blanchard Machine Co., Cambridge, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cady, C. N. Co., Canastota, N. Y.  
 Cincinnati Grinder Co., Cincinnati, O.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Diamond Machine Co., Providence, R. I.  
 Draper & Hall Co., Middletown, Conn.  
 Fraser—Warren F. Fraser Co., Westboro, Mass.  
 Gardner Machine Co., Beloit, Wis.  
 Garvin Machine Co., The, New York, N. Y.  
 Grayson—Grayson Tool & Mfg. Co., Charleston, W. Va.  
 Hawes, C. L. Ashtabula, Ohio.  
 Heald—Heald Machine Co., Worcester, Mass.  
 Hisey-Wolf Machine Co., Cincinnati, Ohio.  
 Ideal—Neil & Smith Electric Tool Co., Cincinnati, O.  
 La Salle Micrometer—La Salle & Tool Co., La Salle, Ill.  
 ♦ Little Giant—Chicago Pneumatic Tool Co., New York.  
 Manhattan—Manhattan Machine & Tool Works, Grand Rapids, Mich.  
 Nelson Blower & Furnace Co., Boston, Mass.  
 New Yankee—Wilmarth & Morman Co., Grand Rapids, Mich.  
 Pratt & Whitney Co., Hartford, Conn.  
 Reid Bros. Co., Inc., Beverly, Mass.  
 Reed-Prentice Co., Worcester, Mass. (vertical)  
 Saxon—New Britain Machine Co., New Britain, Conn.  
 Springfield Mfg. Co., The, Bridgeport, Conn.  
 The Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.  
 Thompson—The Thompson Grinder Co., Springfield, O.  
 Valley City Machine Works, Grand Rapids, Mich.  
 Walker, O. S., Co., Worcester, Mass.  
 Wilmarth-Morman—Wilmarth & Morman Co., Grand Rapids, Mich.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Inc., Louisville.

**GRINDERS, SWING FRAME.**

Nicholson, W. H., Co., Wilkes-Barre, Pa.

**GRINDERS, TAP.**

Grand Rapids Grinding Machine Co., Grand Rapids, Mich.  
 ♦ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.

**GRINDERS, TOOL.**

American—American Grinder Mfg. Co., Milwaukee, Wis. (hand & power).  
 Athol Machine & Foundry Co., Athol, Mass.  
 ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Atlas Machine Co., Nashville, Tenn.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Besley, Chas. H. & Co., Chicago, Ill.  
 B. & K.—Bignall & Keeler Mfg. Co., Edwardsville, Ill.  
 Blount Co., J. G., Everett, Wash.  
 Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buda Co., The, Chicago, Ill.  
 Calder, Geo. H., Lancaster, Pa.  
 Canedy-Otto—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
 Canton Foundry & Machine Co., The, Canton, O.  
 Challenge—Challenge Machine Co., Inc., Philadelphia.  
 Champion—American Grinder Mfg. Co., Milwaukee, Wis.  
 ♦ Champion Blower & Forge Co., Lancaster, Pa.  
 Champion—Safety Emery Wheel Co., Springfield, O.  
 Chapman, H. L., Marcellus, Mich.

Cheney, Royal—S. Cheney & Son, Manlius, N. Y.  
 Cincinnati Milling Machine Co., The, Cincinnati, O.  
 Cleveland Machinery & Supply Co., Cleveland, Tenn.  
 Conco—H. D. Conkey & Co., Mendota, Ill.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Crown—Page Belting Co., Concord, N. H.  
 Cyclone—Richards Wilcox Mfg. Co., Aurora, Ill.  
 Diamond Machine Co., Providence, R. I.  
 Dillon—The Dillon Electric Co., Canton, O.  
 Economy—Wm. S. Nicholls, Hoosick Falls, Pa.  
 El Starr Mfg. Co., Milwaukee, Wis.  
 Emerson Smith & Co., Beaver Falls, Pa.  
 Eureka—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Flint—The Standard Mfg. Co., Bridgeport, Conn.  
 Fry, B. L. Mfg. Co., St. Louis, Mo.  
 ♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Geometric Tool Co., The, New Haven, Conn.  
 Get-on-the-Job—Chicago Wheel Mfg. Co., Chicago, Ill.  
 Glascock Stove Mfg. Co., Greensboro, N. C.  
 Goodell Pratt Co., Greenfield, Mass.  
 Grand Rapids—Grand Rapids Grinding Machine Co., Grand Rapids, Mich.  
 Grant—The Grant Mfg. & Machine Co., Bridgeport, Conn.  
 Greenlee Bros. & Co., Rockford, Ill.  
 Hardinge Bros., Inc., Chicago, Ill.  
 Helwig Mfg. Co., St. Paul, Minn. (portable pneumatic).  
 Hemming Bros. Co., The, New Haven, Conn.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.  
 Hoysradt & Case, Kingston, N. Y.  
 Howe Safety Appliance Co., Granite City, Ill.  
 Imperial, Plymouth, Queen—Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Jones—Huntsville Foundry & Machine Works, Huntsville, Ala.  
 Keystone Grinder & Mfg., Co., Pittsburg, Pa. (railroad).  
 La Salle—La Salle Tool Co., La Salle, Ill.  
 Lighting—Topping Bros., New York, N. Y.  
 Little Giant—Chicago Pneumatic Tool Co., New York.  
 Lumsden—Alfred Herbert, Ltd., New York.  
 Luther Grinder Mfg. Co., Milwaukee, Wis. Trade names—Best Maide, Challenge, Dime Special, Hummer, Mechanics' Special.  
 Machinery Co. of America, Big Rapids, Mich.  
 Marschke Economy—Marschke Mfg. Co., Indianapolis, Ind.  
 Marvel—Chicago Pulley Shafting Co., Chicago, Ill. (ball-bearing).  
 Mechanic Specials—Luther Grinder Mfg. Co., Milwaukee, Wis.  
 Metz—Metz Machine Tool Works, Chicago, Ill.  
 Modern—Modern Grinder Mfg. Co., Milwaukee, Wis.  
 Monmouth—McIntosh Foundry & Machine Co., Monmouth, Ill.  
 Monarch—El-Starr Mfg. Co., Milwaukee, Wis.  
 Mummert-Dixon Oilstone—Mummert-Dixon Co., Hanover, Pa.  
 Myers—Myers Machine Tool Corp., Columbia, Pa.  
 Namco—National Acme Co., The, Cleveland, O.  
 New Yankee—Wilmarth & Morman Co., Grand Rapids, Mich.  
 Niagara—Carborundum Co., Niagara Falls, N. Y. (hand and foot power).  
 Noble & Westbrook Mfg. Co., Hartford, Conn.  
 Norton—Norton Co., Worcester, Mass.  
 Oakley—Oakley Machine Tool Co., Cincinnati, Ohio.  
 Obermayer Co., The, S. Cincinnati, O.  
 Ohio—Oesterlein Machine Co., The, Cincinnati, O.  
 Oilstone—Baldwin, Tuthill & Bolton, Grand Rapids, Mich.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Olmsted's L. H. Olmsted Mfg. Co., New York, N. Y.  
 ♦ Partridge—E. O. Partridge, Chicago, Ill.  
 Peerless—The Lancaster Peerless Emery Wheel Co., Lancaster, Pa.  
 Pittsburgh Grinding Wheel Co., Pittsburgh, Pa. (swing frame).  
 Prairie du Chien Tool Co., Prairie du Chien, Wis.  
 Trade names—Prairie, Speeder, Sturdbilt.  
 Pratt & Whitney Co., Hartford, Conn.  
 Pribnow—Pribnow Swage & Tool Works, Sheboygan, Wis.  
 Pyko—Pike Mfg. Co., Pike, N. H.  
 Ransom Mfg. Co., Oshkosh, Wis.  
 Reed-Prentice Co., Boston, Mass.  
 ♦ Royersford Foundry & Machine Co., Philadelphia, Pa.  
 San Francisco Engineering Co., San Francisco, Cal.  
 Sellers & Co., Inc., William, Philadelphia, Pa.  
 Simmons—Detroit Emery Wheel Co., Detroit, Mich.  
 Simmons Machine Co., Inc., Albany, N. Y.  
 Springfield Mfg. Co., The, Bridgeport, Conn.  
 Star Corundum Wheel Co., Detroit, Mich.  
 Stearns, E. C., & Co., Syracuse, N. Y.  
 Sterling Grinding Wheel Mfg. Co., Tiffin, O.  
 Sterling—Young, Corley & Dolan, Inc., New York.  
 St. Louis—Western—St. Louis Machine Tool Co., St. Louis, Mo. (Bench & Floor).  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Success—Buffalo Specialty Co., Buffalo, N. Y.  
 Tanite—The Tanite Co., Stroudsburg, Pa.

Taylor—Tabor Mfg. Co., Philadelphia, Pa.  
 Taylor & Fenn Co., Hartford, Conn.  
 Temco—Temco Electric Motor Co., Leipsic, O.  
 U. S. Electrical Mfg. Co., Los Angeles, Cal.  
 Valley City Machine Wks., Grand Rapids, Mich.  
 Van Dorn—Van Dorn Electric Tool Co., Cleveland, O. (Light and heavy duty).  
 Walker—Walker, O. S., & Co., Worcester, Mass. (wet).  
 Waterbury—The Blake & Johnson Co., Waterbury, Conn.  
 Wells—F. E. Wells & Son Co., Greenfield, Mass.  
 Western Hardware Mfg. Co., Milwaukee, Wis. (hand power).  
 Whitney Mfg. Co., Hartford, Conn.  
 Woods Engineering Co., The, Alliance, O.  
 Worcester Pattern & Model Co., Worcester, Mass.

**GRINDERS, TOOL POST.**

Chicago Pneumatic Tool Co., New York, N. Y.  
 Cincinnati Electric Tool Co., Cincinnati, Ohio.  
 Electro—Electro-Magnetic Tool Co., Chicago, Ill.  
 Hisey-Wolf Machine Co., The, Cincinnati, O.  
 Stow Manufacturing Co., Inc., Binghamton, N. Y. (electric).  
 Temco Electric Co., The, Leipsic, O. (portable, electric).  
 United States Electric Tool Co., Cincinnati, Ohio.  
 Van Dorn Electric Tool Co., Cleveland, Ohio.  
 Wisconsin Electric Co., Racine, Wis.

**GRINDERS, TWIST DRILL.**

American—American Grinder Mfg. Co., Milwaukee, Wis.  
 American—La Salle Tool Co., La Salle, Ill.  
 American—The Heald Machine Co., Worcester, Mass.  
 Bickford-Switzer Co., The, Greenfield, Mass.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Garvin Machine Co., The, New York, N. Y.  
 Grand Rapids Grinding Machine Co., Grand Rapids, Mich.  
 ♦ Hydroll, Greenfield—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 New Yankee—Wilmarth & Morman Co., Grand Rapids, Mich.  
 Perfection—Bellevue Industrial Furnace Co., Detroit, Mich.  
 Pratt & Whitney Co., Hartford, Conn.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Safety Emery Wheel Co., Springfield, O.  
 Sellers & Co., Inc., William, Philadelphia, Pa.  
 Standard—Keystone Grinder & Mfg. Co., Pittsburg, Pa.  
 Standard Tool Co., Cleveland, O.  
 ♦ U. S. Electrical Tool Co., Cincinnati, O.  
 Worcester—Washburn Shops, Worcester, Mass.

**GRINDERS, UNIVERSAL.**

(See "Grinders, Surface," "Grinders, Internal," and "Grinders, Tool.")  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cincinnati Milling Machine Co., Cincinnati, O.  
 Fraser—Warren F. Fraser Co., Westboro, Mass.  
 Grand Rapids Grinding Machine Co., Grand Rapids, Mich.  
 ♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hicks—Woods Engineering Co., The, Alliance, O.  
 Manhattan Machine & Tool Works, Grand Rapids, Mich.  
 McDonough Mfg. Co., Eau Claire, Wis.  
 Ott Grinder Co., Indianapolis, Ind.  
 Simmons Machine Co., Inc., Albany, N. Y.  
 Thompson—Thompson Grinder Co., Springfield, O.  
 T.-P.—Taft-Pierce Mfg. Co., Woonsocket, R. I.  
 ♦ Wells—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Wilmarth & Morman Co., Grand Rapids, Mich.  
 Wisconsin—Danber-Kratsch Co., Oshkosh, Wis.

**GRINDERS, VALVE.**

Dumore—Wisconsin Electric Co., Racine, Wis.

**GRINDSTONES.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Aurora Gem, Primus, Marathon, Dandy, Justrite, Star—Aurora Door Hanger & Spec. Co., Aurora, Ill.  
 Buckeye—The Ohio Quarries Co., Cleveland, O.  
 Cleveland—Cleveland Stone Co., Cleveland, O. (loose and mounted).  
 Grabo, E. O., New York, N. Y. (iron frame).  
 Grafton Stone Co., Grafton, O.  
 Hoppen—J. E. Hoppen & Sons, Belleville, N. J.  
 Huron Grindstone Co., Port Huron, Mich.  
 Keystone—Cleveland Stone Co., Cleveland, O.  
 Marietta Stone Co., Marietta, Ohio (unmounted).  
 Mitchell Grindstone Works, Philadelphia, Pa.  
 Obermayer Co., The, S. Cincinnati, O.  
 Oliver—Oliver Machinery Co., Grand Rapids, Mich.  
 Pike Mfg. Co., Pike, N. H.  
 Richard-Wilcox—Richard-Wilcox Mfg. Co., Aurora, Ill. (mounted).  
 Wallace Mfg. Co., Port Austin, Mich.

- Waterbury—The Blake & Johnson Co., Waterbury, Conn.  
 ♦ W. B.—Whitman & Barnes Mfg. Co., Akron, O.

**GRIPS, CABLE.**

- Diamond Machine Co., Monongahela, Pa.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.

**GRIPS, WRENCH, FOR PIPE.**

- Lockhart—R. James Lockhart, Pittsburg, Pa.  
 New Peerless—Prentiss Vise Co., New York, N. Y.  
 Standard—Athol Machine & Foundry Co., Athol, Mass.

**GROUND KEY WORK.**

(See "Bibbs" and "Cocks.")

**GUARDS, ELECTRIC LAMP.**

- ♦ Flexco, Flexco-Lok—Flexible Steel Lacing Co., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Gripon—McGill Mfg. Co., Valparaiso, Ind.  
 Just Right—Standard Wire Co., New Castle, Pa.  
 Loxon—McGill Mfg. Co., Valparaiso, Ind.  
 Steelite—Inland Electric Co., Chicago, Ill.  
 Safety Fire Extinguisher Co., The, New York.  
 Standard—Standard Wire Co., New Castle, Pa.

**GUARDS AND SAFETY APPLIANCES, MACHINERY.**

- Allstale, Howe—Howe Safety Appliance Co., Granite City, Ill.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 American Warming & Ventilating Co., Elmira, N. Y.  
 Barshal Company, Inc., The, Cleveland, Ohio.  
 Bass Bros., New York, N. Y.  
 Benjamin Electric Mfg. Co., Chicago, Ill. (punch press).  
 Buffalo Wire Works, Buffalo, N. Y.  
 Butterfield & Canty, Logan, O. (for shaper).  
 Challenge Machine Co., Inc., Philadelphia, Pa.  
 Champion Machinery Co., Joliet, Ill. (for jointer).  
 "Cream City"—Geuder, Paeschke & Frey Co., Milwaukee, Wis. (for stamping presses).  
 D. and M.—Taylor-Shantz Co., Rochester, N. Y. (for punch presses).  
 Dexter Metal Mfg. Co., Camden, N. J.  
 Erdie Perforating Co., Rochester, N. Y.  
 Fair Mfg. Co., Racine, Wis. (for shapers).  
 Gordon, R. E., Chicago, Ill.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Gustafson & Scott Mfg. Co., Chicago, Ill. (saw).  
 H. & A. Lock Co., Brooklyn, N. Y. (press).  
 Hirsch & Bro., Allentown, Pa.  
 Howe—Howe Safety Appliance Co., Granite City, Ill.  
 Jones Safety—Lockhart-Hodge Co., Inc., Buffalo, N. Y.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Legat—G. E. Prentice Mfg. Co., New Britain, Conn.  
 Littleford Bros., Cincinnati, Ohio.  
 ♦ Machinery Co. of America, Big Rapids, Mich.  
 No Kick—Atlas Mfg. Co., Orlando, Fla. (saw).  
 Oliver—Oliver Machinery Co., Grand Rapids, Mich.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Porter, C. O., Machinery Co., Grand Rapids, Mich.  
 Ransom Mfg. Co., Oshkosh, Wis.  
 Safety Device—The Nye Co., 44 Henry St., Buffalo.  
 Safety Equipment Service Co., The, Cleveland, O.  
 Shurlock—Pass & Seymour, Syracuse, N. Y.  
 Simplex—Zelller & Nagel, Brooklyn, N. Y. (shaper).  
 Surty-Guard Co., Inc., The, Chicago, Ill.  
 Tyler, W. S. Co., The, Cleveland, Ohio.  
 Vandegrift & Morris, The, Shelbyville, Ind.  
 Usona Mfg. Co., St. Louis, Mo.  
 Walsh Press & Die Co., Chicago, Ill. (for presses).  
 Webster & Perks Tool Co., Springfield, O. (emery wheel).  
 Wilcox Engineering Co., Saginaw, Mich.  
 Wood-Workers Tool Works, Chicago, Ill.  
 Wire Hood—Zelller & Nagel, Brooklyn, N. Y. (circular saw).

**GUARDS, SKYLIGHT & WINDOW.**

- Cyclone Red Tag—Cyclone Fence Co., Waukegan, Ill.  
 Hersh & Bro., Allentown, Pa.

**GUARDS, WINDOW, WIRE AND IRON.**

- American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Brown, T. W. & Son, Chattanooga, Tenn.  
 Buffalo Wire Works Co., Buffalo, N. Y.  
 Columbus Wire & Iron Works, Columbus, O.  
 Decatur Cornice & Roofing Co., Inc., Albany, Ala.  
 Fiske Iron Works, J. W., New York.  
 Howard & Morse, New York.  
 Tyler, W. S. Co., The, Cleveland, O.  
 Wright Wire Co., Worcester, Mass.

**GUIDES, ELEVATOR.**

- Standard Gauge Steel Co., Beaver Falls, Pa.

**GUIDES, PIPE.**

- ♦ American District Steam Co., North Tonawanda, N. Y.

**GUIDES, SAW.**

- American—American Saw Mill Machy. Co., Hackettstown, N. J.  
 ♦ Atkins, E. C. & Co., Indianapolis, Ind.  
 Black Diamond—Black Diamond Saw & Machine Works, (ball bearing band), Natick, Mass.  
 Buckeye Vise Co., Cleveland, O.  
 ♦ Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Hoo-Hoo—Reed Hardware & Mfg. Co., Cairo, Ill.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Howe—Howe Safety Appliance Co., Granite City, Ill.  
 ♦ Machinery Co. of America, Big Rapids, Mich.  
 Miner Saw Mfg., J. H., Meridian, Miss.  
 Mohawk Dutchman—Griffiths, Albert, Saw Co., The, Boston, Mass.  
 Ohlen-Bishop Co., The, Columbus, Ohio.  
 Phillips Mfg. Co., Orlando, Fla.  
 Standard Saw Mill Machinery Co., Erie, Pa.  
 Wheland—The Wheland Co., Chattanooga, Tenn.  
 "Wrights"—Clarke Saw & Machine Works, Newark, N. J.

**GUMMERS, SAW.**

- Adams, W. T., Machine Co., Corinth, Miss.  
 American Woodworking Machinery Co., Rochester, N. Y.  
 ♦ Atkins, E. C. & Co., Indianapolis, Ind.  
 California Saw Works, San Francisco, Cal.  
 Crown—Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Diamond Machine Co., Providence, R. I.  
 ♦ Disston, Henry, & Sons, Tacony, Philadelphia, Pa.  
 Emerson, Smith & Co., Beaver Falls, Pa.  
 Gerlach, Peter Co., Cleveland, O.  
 Henderson, W. K., Iron Works & Supply Co., Shreveport, La.  
 Hinds, Thos., Malone, N. Y.  
 Hoe, R., & Co., New York.  
 Hoo-Hoo—Reed Hardware & Mfg. Co., Cairo, Ill.  
 Howell, R. R. & Co., Minneapolis, Minn.  
 I X L—Ajax Mfg. Co., Pittsburg, Pa.  
 ♦ Machinery Company of America, Big Rapids, Mich.  
 Mixer, J. W., Saw Tool Co., Plymouth, Mass.  
 Moak Machine and Tool Co., Port Huron, Mich.  
 Mummert-Dixon Co., Hanover, Pa.  
 Northampton Emery Wheel Co., Leeds, Mass.  
 Ohlen-Bishop Co., The, Columbus, Ohio.  
 Riverside Iron Works, Kokomo, Ind.  
 Rogers, S. C. & Co., Buffalo, N. Y.  
 Rowe & Trunnell, Cincinnati, O.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 Southern Saw Works, Atlanta, Ga.  
 Wood Gummer & Filer Co., Atlanta, Ga.

**GUNPOWDER.**

- Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., De Nemours & Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

**GUNS, CONCRETE AND RIVET CUTTING.**

- Cincinnati—Rivet Cutting Gun Co., Cincinnati, O.

**GUNS, GREASE AND OIL.**

- Agner, Simplex Co., Burlington, Wis.  
 American Lubricator Co., Detroit, Mich.  
 Auto Pump Co., The, Springville, N. Y.  
 Bassick Mfg. Co., Chicago, Ill.  
 Beckley-Ralston Co., Chicago, Ill.  
 Bell—Bell Pump & Mfg. Co., Detroit, Mich.  
 Boston Combination—The Randall-Falchney Co., Boston, Mass.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Brigham Brass Mfg. Co., Chicago, Ill.  
 Copley Leather Packed—Randall-Falchney Co., Inc., Boston, Mass.  
 Essex Brass Corp., Detroit, Mich.  
 Fowler Lamp & Mfg. Co., Chicago, Ill.  
 Hancock Mfg. Co., Charlotte, Mich.  
 Hunter—Hunter Pressed Steel Co., Lansdale, Pa.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Kellogg Mfg. Co., Rochester, N. Y.  
 Manco—Mann Corporation, Kankakee, Ill.  
 Mayo-Skinner Mfg. Co., Chicago, Ill.  
 ♦ Noera Mfg. Co., The, Waterbury, Conn.  
 Osborne & Stephenson Mfg. Co., Plainville, Conn.  
 Rose—Frank Rose Mfg. Co., Hastings, Neb.  
 ♦ Roversford Foundry & Machine Co., Philadelphia, Pa.  
 Stricklex—Atkins, Young & Allen Co., Chicago, Ill.

**GUNS, PAINT.**

(See, also, "Machines, Painting.")

- Spray Engineering Co., Boston, Mass.

**GUNS, SLAG DIGGING.**

- Rivet Cutting Gun Co., Cincinnati, Ohio.

**GUTTERS, URINAL.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Rose—Rose Mfg. Co., Hastings, Neb.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Union Sanitary Works, Noblesville, Ind.

**GYPSIES.**

American Engineering Co., Philadelphia, Pa.  
 Maine Electric Co., Portland, Me.

**HAMMERS, BLACKSMITHS' AND HORSESHOERS'.**

Billings & Spencer Co., The, Hartford, Conn.  
 Cheney—Cheney Hammer Corp., Little Falls, N. Y.  
 Fisher & Norris, Trenton, N. J.  
 Heller Bros. Co., Newark, N. J.  
 Horseshoe—The Stanley Works, Atha Dept., New Britain, Conn.  
 Iron City Star—Iron City Tool Works, Pittsburgh, Pa.  
 Maydole—The David Maydole Hammer Co., Norwich, N. Y.  
 Peck, Stow & Wilcox Co., Southington, Conn.  
 Stanley Rule & Level Plant, New Britain, Conn.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Warren Tool & Forge Co., The, Warren, O.

**HAMMERS, BRASS.**

Goodell-Pratt Co., Greenfield, Mass.  
 Welch, T. F., & Co., Boston, Mass.

**HAMMERS, BRICKLAYERS, PATTERNMAKERS, PROSPECTING, TILESSETTERS.**

Cheney—Henry Cheney Hammer Co., Little Falls, N. Y.  
 Maydole—The David Maydole Hammer Co., Norwich, N. Y.

**HAMMERS, CALKING.**

American Saw & Tool Works, Chicago, Ill.  
 Anderson, W. H., Tool & Supply Co., Detroit, Mich.  
 Dayton, Green—Dayton Pneumatic Tool Co., Dayton, O.  
 Helwig—Helwig Mfg. Co., St. Paul, Minn.  
 Ingersoll-Rand Co., New York.  
 Mueller Mfg. Co., Decatur, Ill.  
 National Tool Co., New York, N. Y.  
 Pollard, Jos. G., Co., Inc., Brooklyn, N. Y.  
 Stanley Rule & Level Works, Atha Dept., New Britain, Conn.  
 Vulcan Tool & Mfg. Co., Quincy, Mass.

**HAMMERS, CARPENTERS'.**

Alsteel—Boker Cutlery & Hdw. Co., Inc., New York.  
 Arcade Mfg. Co., Freeport, Ill.  
 Billings & Spencer Co., Hartford, Conn.  
 Cheney—Cheney Hammer Corp., Little Falls, N. Y.  
 Clipper Hi-Carbon—Clipper Tool Co., Buffalo, N. Y.  
 D. Maydole Cast Steel—The David Maydole Hammer Co., Norwich, N. Y.  
 E-I-T—Eureka Improved Tool Co., New York, N. Y.  
 Gray Iron Foundry Co., Reading, Pa.  
 (G. T. W.)—Griffith Tool Works, Philadelphia, Pa.  
 Hammond, C., & Son, Ogontz, Pa.  
 Heller Bros. Co., Newark, N. J.  
 Horseshoe—The Stanley Works, Atha Dept., New Britain, Conn.  
 Johnson, Wm., Newark, N. J.  
 Maydole—The David Maydole Hammer Co., Norwich, N. Y.  
 Milwaukee Tool & Forge Co., Milwaukee, Wis.  
 Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Plumb, Fayette R., Inc., Philadelphia, Pa.  
 Sayre, L. A., Company, Newark, N. J.  
 Smith & Hemenway Co., New York.  
 Southington Mfg. Co., Southington, Conn.  
 Stanley Rule & Level Plant, New Britain, Conn.  
 Stover Mfg. Co., Freeport, Ill.  
 Vaughn & Bushnell Mfg. Co., Chicago, Ill.  
 Wrightsville Hardware Co., Wrightsville, Pa.

**HAMMERS, CHIPPING.**

Cheney—Henry Cheney Hammer Co., Little Falls, N. Y.  
 Ingersoll-Rand Co., New York.

**HAMMERS, COOPERS'.**

National Tool Co., Brooklyn, N. Y.

**HAMMERS, COPPER.**

Clendenin Bros., Inc., Baltimore, Md.  
 Graham, James & Co., New Haven, Conn.  
 Hungerford, U. T., Brass & Copper Co., New York.  
 McNab & Harlin Mfg. Co., New York, N. Y.

Maydole—The David Maydole Hammer Co., Norwich, N. Y.  
 Richardson Brass Co., Edro, Baltimore, Md. (cast)  
 Seattle Brass Co., Seattle, Wash.  
 West Haven Mfg. Co., West Haven, Conn.  
 Williams—E. A. Williams & Son, Inc., Jersey City, N. J.

**HAMMERS, DROP, BOARD.**

Chambersburg Engineering Co., Chambersburg, Pa.  
 Long, Allstatter Co., Hamilton, O.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Waterbury-Farrel Fdy. & Mach. Co., Waterbury, Conn.

**HAMMERS, ELECTRIC.**

Electro-Magnetic Tool Co., Chicago, Ill.  
 Wodack—Wodack Electric Tool Corp., Chicago, Ill.

**HAMMERS, FIBRE FACED.**

Oliver Mfg. Co., W. W., Buffalo, N. Y.

**HAMMERS, HARDENING.**

American Gas Furnace Co., Elizabeth, N. J.

**HAMMERS, LEAD.**

National Tool Co., Brooklyn, N. Y.  
 Rebele, L. J., New York, N. Y.  
 U. S. Indestructible Gasket Co., New York.  
 Westfield Plate Co., Thompsonville, Conn.

**HAMMERS, MACHINISTS'.**

Alsteel—Boker Cutlery & Hdw. Co., Inc., New York.  
 B. & S.—The Billings & Spencer Co., Hartford, Conn.  
 Bernz, Otto, Newark, N. J.  
 Buffum Tool Co., Louisiana, Mo.  
 Cheney—Henry Cheney Hammer Co., Little Falls, N. Y.  
 D. Maydole Cast Steel—David Maydole Hammer Co., Norwich, N. Y.  
 Hammond, C., & Son, Ogontz, Pa.  
 Heller Bros.—Heller Bros. Co., Newark, N. J.  
 Herbrand Co., The, Fremont, O.  
 Horseshoe—The Stanley Works, Atha Dept., New Britain, Conn.  
 Keller Pneumatic Tool Co., Fond du Lac, Wis.  
 Klein-Lozan Co., The, Pittsburgh, Pa.  
 Morrell Pattern—Clipper Tool Co., Buffalo, N. Y.  
 Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Perfect Handle—The H. D. Smith & Co., Plantsville, Conn.  
 Quikwerk—Warren Tool & Forge Co., Warren, O.  
 Stanley Rule & Level Works, Atha Div., New Britain, Conn.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Vlchek Tool Co., The, Cleveland, O.  
 Warner & Son, M. R., Cromwell, Conn.

**HAMMERS, MALLET AND MAULE, RAWHIDE.**

Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Colvin—Greene, Tweed & Co., New York, N. Y.  
 Holbrook Raw Hide Co., Providence, R. I.  
 Sperry, D. R., & Co., Batavia, Ill.

**HAMMERS, PILE PULLING AND DRIVING.**

McKiernan-Terry Drill Co., New York.

**HAMMERS, PNEUMATIC.**

(See "Tools, Pneumatic.")

Barr—H. Edsall Barr, Erie, Pa.  
 Boyer, Kelley—Chicago Pneumatic Tool Co., New York.  
 Canton Pneumatic Tool Co., The, Canton, O.  
 Champion, Green and New Dayton—Dayton Pneumatic Tool Co., Dayton, O.  
 Sullivan Machinery Co., Chicago, Ill. (forging).  
 Titan—Titan Automatic Tool Co., New York.

**HAMMERS, POST.**

Q-M-S—Hanna Engineering Wks., Chicago, Ill.

**HAMMERS, POWER, BELT AND MOTOR DRIVEN.**

Beaudry, Champion—Beaudry & Co., Inc., Boston, Mass.  
 Bradley, C. C., & Son, Syracuse, N. Y.  
 Dupont—United Hammer Co., Boston, Mass.  
 Kidder, R. E., Co., Worcester, Mass.  
 Little Giant Manufacturing Co., Mankato, Minn.  
 Long & Alstatter Co., Hamilton, O.  
 Machine Tool Engineering Company, The, 149 Broadway, N. Y. City.  
 Massillon—Massillon Foundry & Machine Co., Massillon, O.  
 Nazel Engine & Machine Works, Philadelphia, Pa.  
 Toledo Machine & Tool Co., Toledo, O.

**HAMMERS, POWER, DROP.**

Alliance Machine Co., Alliance, O.  
 Beaudry—Beaudry & Co., Inc., Boston, Mass.

Belden Co., New Haven, Conn.  
 Bell—Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Bellefonte Cushion—Bellefonte Engineering Co., Bellefonte, Pa.  
 Bliss—E. W. Bliss & Co., Brooklyn, N. Y.  
 Boss—Novelty Iron Wks., Dyersville, Ia.  
 Bradley—C. C. Bradley & Son, Syracuse, N. Y.  
 ♦ B. & S.—The Billings & Spencer Co., Hartford, Conn.  
 Buckeye Engine Co., Salem, O.  
 Chambersburg Eng. Co., Chambersburg, Pa.  
 Cleveland Punch & Shear Works, Cleveland, O.  
 Dienelt & Eisenhardt, Inc., Philadelphia, Pa.  
 Erie—Erie Foundry Co., Erie, Pa.  
 Garrison, A., Foundry Co., Pittsburg, Pa.  
 Gould & Eberhardt, Newark, N. J.  
 Justice—Phillip S. Justice & Co., Philadelphia, Pa.  
 Kane & Roach, Syracuse, N. Y.  
 Kerrihard Co., Red Oak, Ia.  
 Little Giant—Little Giant Co., Mankato, Minn.  
 Massillon Foundry & Machine Co., Massillon, O.  
 Mayer—Moloch Company, Kaukauna, Wis.  
 Merrill Bros., Maspeth, N. Y.  
 Merriman—Meriden Press & Drop Co., The, Meriden, Conn.  
 Morgan Engineering Co., Alliance, O.  
 Nazel—Nazel Engineering & Machine Works, Philadelphia.  
 Niles-Bement-Pond Co., New York, N. Y.  
 The Peck Drop—Miner & Peck Mfg. Co., Derby, Conn.  
 San Francisco Engineering Co., San Francisco, Cal.  
 Scranton—The Scranton Co., New Haven, Conn.  
 Standard Machinery Co., Providence, R. I.  
 Toledo Machine & Tool Co., Toledo, O.  
 United Engineering & Foundry Co., Pittsburg, Pa.  
 Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn.  
 Williams, White & Co., Moline, Ill.  
 Wood, Wm. H., Media, Pa.

#### HAMMERS, POWER, BELVE.

Armstrong Mfg. Co., Waterloo, Ia.  
 Bradley, C. C., & Sons, Syracuse, N. Y.  
 Chicago Rawhide Co., Chicago, Ill.  
 Helva Hard Hitter—Novelty Iron Wks., Dyersville, Ia.  
 High Speed Hammer Co., Rochester, N. Y.  
 Kerrihard Co., Red Oak, Iowa.  
 Long & Allstatter Co., The, Hamilton, O.  
 Nazel—Nazel Engineering & Machine Works, Philadelphia, Pa.  
 Niles, Bement & Pond Co., New York, N. Y.  
 Rochester—The West Tire Setter Co., Rochester, N. Y.  
 United Hammer Co., Boston, Mass.

#### HAMMERS, RIVETING (HAND).

Buffum Tool Co., Louisiana, Mo.  
 Champion Tool Co., Meadville, Pa.  
 Cheney—Henry Cheney Hammer Co., Little Falls, N. Y.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Hammond, C., & Son, Ogontz, Pa.  
 Helwig—Helwig Mfg. Co., St. Paul, Minn.  
 High Speed Hammer Co., Rochester, N. Y.  
 Keller Master—Keller Pneumatic Tool Co., Grand Haven, Mich.  
 Little David—Ingersoll-Rand Co., New York, N. Y.  
 ♦ Maydole—Maydole Hammer Co., The David, Norwich, N. Y.  
 Oldham—Oldham, Geo., & Son Co., Philadelphia, Pa.  
 ♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Spinhammer—Pressed Metal Machinery Co., Chicago, Ill.  
 Stanley Rule & Level Plant, New Britain, Conn.  
 Stover Mfg. Co., Freeport, Ill.  
 Vaughan & Rushnell Mfg. Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Vichek Tool Co., Cleveland, O.

#### HAMMERS, SAW MAKERS.

Arm & Hammer—The Columbus Anvil & Forging Co., Columbus, Ohio.  
 Machinery Company of America, Big Rapids, Mich.

#### HAMMERS, STEAM.

Alliance Machine Co., Alliance, O.  
 Bell—Buffalo Foundry & Machine Co., The, Buffalo.  
 Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Dudgeon, Richard, New York, N. Y.  
 Elmes Engineering Works, Chas. F., Chicago, Ill.  
 Erie—Erie Foundry Co., Erie, Pa.  
 Industrial Works, Bay City, Mich.  
 Massillon—Massillon Foundry & Machine Co., Massillon, O.  
 Mesta Machine Co., Pittsburg, Pa.  
 Morgan Engineering Co., Alliance, O.  
 National Hoisting Engine Co., Harrison, N. J.  
 Nazel—Nazel Engineering & Machine Works, Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Q M S—Vulcan Engineering Sales Co., Chicago, Ill.  
 Prentiss Tool & Supply Co., New York.  
 Sellers & Co., Inc., William, Philadelphia, Pa.  
 Tioga—Tioga Steel & Iron Co., Philadelphia, Pa.

Toledo Machine & Tool Co., Toledo, O.  
 Waterbury Farrel Foundry & Machine Co., Waterbury, Conn.

#### HAMMERS, TINNERS.

Cheney—Henry Cheney Hammer Co., Little Falls, N. Y.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 ♦ Maydole—The David Maydole Hammer Co., Norwich, N. Y.

#### HAMMERS, UPKOLSTEBERS.

Arcade Mfg. Co., Freeport, Ill.  
 Browne, G. W., Mfg. Co., Kingston, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Lowentrout, P., Mfg. Co., Newark, N. J.  
 Sayre, L. A., & Son, Newark, N. J.  
 S. & S.—Schuchardt & Schutte, New York, N. Y.  
 Stanley Rule & Level Works, New Britain, Conn.  
 Wrightsville Hardware Co., Wrightsville, Pa.

#### HAND SCREWS.

(See "Clamps, Cabinet Makers," and "Clamps, Machinists.")

#### HANDLES, BALANCE, CRANK.

Williams & Co., J. H., Brooklyn, N. Y.

#### HANDLES, BASIN AND BATH COCK, PORCELAIN.

Avco—Alliance Vitreous China Co., The, Alliance, O.  
 Frank Bros., New York, N. Y.  
 Hutter, Karl, Inc., New York, N. Y.

#### HANDLES, DROP, BOX AND BARREL.

Mullins Body Corp., Stamping Dept. A., Salem, O.

#### HANDLES, FILE, CHISEL, ETC.

Allen, Chas. I., Terryville, Conn.  
 Auburn Handle Co., Auburn, Ind.  
 Baker-McMillan Co., Akron, O.  
 Buckeye Vise Co., Cleveland, O.  
 Buck Bros., Millbury, Mass.  
 Bullock Mfg. Co., Springfield, Mass.  
 Columbus Handle & Tool Co., The, Columbus, Ind.  
 C. S. Co.—The Chapin-Stephens Co., Pine Meadow, Conn.  
 Corry Handle & Novelty Co., Corry, Pa.  
 Delapierre Inc., Arthur, New York, N. Y.  
 Delaware Hard Fibre Co., Wilmington, Del.  
 ♦ Diamond Slate Fibre Co., Bridgeport, Pa.  
 Doctor—Doane Mfg. Co., Boston, Mass.  
 Estes, E. B., & Sons, New York, N. Y.  
 Gray, D. W., Co., Inc., New York, N. Y.  
 Grover—Grover File Co., The, Nashua, N. H.  
 Hartigan, W. R., Collinsville, Conn.  
 Indestructible—J. L. Osgood Tool Co., Buffalo.  
 Lock Jaw—Robinson, M. W. Co., New York, N. Y.  
 Lutz—Lutz File Co., Cincinnati, Ohio.  
 Millers Falls Co., New York, N. Y.  
 Moore Bros., Jamestown, N. Y.  
 Novelty Turning Co., Norway, Me. (hickory).  
 Osgood, J. L., Tool Co., Buffalo, N. Y.  
 ♦ Peck, Stow & Wilcox Co., Southington, Conn.  
 Peterson, F. W. Co., New York, N. Y.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Rawson, Frank C., Co., Inc., Winchendon, Mass.  
 Reading—Reading Wood Pulley Co., Reading, Pa.  
 Rowe, Henry, Mfg. Co., Newaygo, Mich.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 Skru-On, Suregrip—Parker Expansion Bolt Co., New York.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Stiles & Co., H. A., Boston, Mass.  
 Stratton Mfg. Co., Stratton, Me.  
 Strombeck-Becker Mfg. Co., Moline, Ill. (chisel).  
 Swan, James, Co., Seymour, Conn.  
 Taperfit—Strombeck-Becker Mfg. Co., Moline, Ill. (file).  
 Tatem, J. R., & Son, Putnam, Conn.  
 Troy File Works, Troy, N. Y.  
 Union Hardware Co., Torrington, Conn.  
 10-Steel—Bergman Tool Mfg. Co., Buffalo, N. Y.  
 Walls' Indestructible—T. F. Walls Tool & Supply Co., New York, N. Y.  
 White Co., L. & J. J., Buffalo, N. Y.  
 Williams & Marvin Mfg. Co., Deep River, Conn.  
 Zellicker, Walter A., Supply Co., St. Louis, Mo.  
 Zimmerman Mfg. Co., Owosso, Mich. (axe, sledge, etc.)

#### HANDLES, FOR GAS STOVE COCKS AND OVEN DOORS.

Hutter, Karl, Inc., New York, N. Y.

#### HANDLES, HYDRANT.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

#### HANDLES, MACHINE.

Berger—Berger Bros. Co., Philadelphia, Pa.



Billings & Spencer Co., The, Hartford, Conn.  
Cincinnati—Cincinnati Ball Crank Co., Cincinnati, O.  
Kilborn & Bishop Co., New Haven, Conn.  
Meriden Machine Tool Co., Meriden, Conn.  
Rockwood Sprinkler Company of Mass., Worcester, Mass.

◆ **Williams & Co., J. E., Brooklyn, N. Y.**

**HANDLES, SAW.**

- ◆ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
◆ Disston & Sons Co., Henry, Philadelphia, Pa.

**HANDLES, VALVE.**

(See "Wheels, Valve.")

**HANDLES, VALVE, FIBRE.**

Delaware Hard Fibre Co., Wilmington, Del.

**HANDLES, WOODEN—AXE, HOE, ETC.**

Baldwin—Baldwin Tool Works, Parkersburg, W. Va. (hoe, fork and shovel).  
National Handle Co., Frankfort, Ind.  
New York Wheelbarrow Co., New York, N. Y.  
North American Handle Co., Boston, Mass.  
Piqua Handle & Mfg. Co., Piqua, O.  
Rockwood Sprinkler Company of Mass., Worcester, Mass.  
Stiles, H. A. & Co., Boston, Mass.  
Warren, A. & Tool Co., Warren, Pa.  
Winchester "D" Handle Co., The, Bellevue, O.  
Zelnicker—Walter A. Zelnicker Supply Co., St. Louis, Mo.

**HANDS, STEAM GAUGE.**

Waterbury Mfg. Co., Waterbury, Conn.

**HANGERS, BEAM AND JOIST.**

- ◆ American Iron & Steel Mfg. Co., Lebanon, Pa.  
◆ Columbian Hardware—Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
Galva Heater Co., Galva, Ill.  
Lane Patent—W. J. Clark Co., Salem, O.  
◆ Oliver Iron & Steel Co., Pittsburgh, Pa.

**HANGERS, BELT SHIFTER.**

- ◆ Chicago Pulley & Shafting Co., Chicago, Ill.

**HANGERS, COLLAR OILING.**

- ◆ Hill Clutch Co., Cleveland, O.

**HANGERS, CONDUIT.**

Chicago Expansion Bolt Co., Chicago, Ill.

**HANGERS, COUNTERSHAFT.**

- American Tool & Machine Co., Boston, Mass.  
Baird Machine Co., The, Bridgeport, Conn.  
◆ Bantam—Standard Pressed Steel Co., Philadelphia, Pa.  
◆ Barry—R. & J. Dick Co., Inc., Passaic, N. J.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Keystone—Keystone Pulley Co., Oneida, N. Y.  
◆ Medart Patent Pulley Co., St. Louis, Mo.  
◆ Oneida Steel Pulley Co., Oneida, N. Y.

**HANGERS, DOOR, AND TRACKS.**

- Aurora Door Hanger & Specialty Co., Aurora, Ill.  
(Trade names—Aurora De Luxe, Aurora Rex, Iron Duke, Perfection, Prince, Star, Queen, Victor).  
◆ Chisholm-Moore Mfg. Co., Cleveland, O.  
Hunt, Helm & Ferris, Harvard, Ill.  
Louden Machinery Co., The, Fairfield, Iowa.  
McKinney Mfg. Co., Pittsburg, Pa.  
◆ Myers, F. E. & Bros., Ashland, O.  
"Reliable," "Watershed"—Allith-Prouty Co., Danville, Ill.  
Richards-Wilcox Mfg. Co., Aurora, Ill.  
Stanley Rule & Level Works, New Britain, Conn.  
Stowell Co., The, South Milwaukee, Wis.

**HANGERS, HAVE TROUGH.**

Decatur Cornice & Roofing Co., Inc., Albany, Ala.  
Delphos Mfg. Co., Delphos, Ohio.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.  
Triple Twist—Parker Cup & Specialty Works, Parker Landing, Pa.

**HANGERS, ELECTRIC CABLE.**

Diamond Expansion Bolt Co., New York, N. Y.  
Roebbling's, John A., Sons Co., Trenton, N. J.  
Star—Star Expansion Bolt Co., New York, N. Y.

**HANGERS, ELEVATOR DOOR.**

Richards-Wilcox Mfg. Co., Aurora, Ill.

**HANGERS, FIRE DOOR.**

Allith-Prouty Co., Danville, Ill.  
Coburn—Coburn Trolley Track Mfg. Co., Holyoke, Mass.

## "A Hanger For Any Door That Slides"

including Warehouse, Pier, Church, School House, Garage, House and Barn Doors

**Richards-Wilcox Mfg. Co.**  
"A Hanger for any Door that Slides"  
AURORA, ILLINOIS U.S.A.

McCabe—The McCabe Hanger Mfg. Co., New York.  
Monarch—Richards-Wilcox Mfg. Co., Aurora, Ill.  
R.-W.—Richards-Wilcox Mfg. Co., Aurora, Ill.  
Richmond Safety Gate Co., Richmond, Ind.  
Vulcan—Aurora Door Hanger & Specialty Co., Aurora, Ill.

**HANGERS AND HARDWARE, GARAGE DOOR.**

Aurora Door Hanger Specialty Co., Aurora, Ill.  
Cannon Ball—Hunt-Helm-Ferris Co., Harvard, Ill.  
Coburn—Coburn Trolley Track Mfg. Co., Holyoke, Mass.  
Corn-It-Wisc, R.-W., Slyda Syde, Sildettite—Richards-Wilcox Mfg. Co., Aurora, Ill.  
Double, Hummer, Straight-A-Way—J. E. Porter Co., Corp., Ottawa, Ill.  
Lane Bros. Co., Poughkeepsie, N. Y.  
Louden Machinery Co., The, Fairfield, Ia.  
McKinney Mfg. Co., Pittsburg, Pa.  
Porter, J. E., Corp., Ottawa, Ill.  
Richmond Safety Gate Co., Richmond, Ind.  
Stanley Works, The, New Britain, Conn.  
Ten Eighty—Allith-Prouty Co., Danville, Ill.

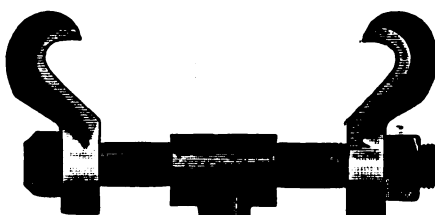
**HANGERS, HEAD SHAFT.**

- ◆ Hill Clutch Co., The, Cleveland, O.  
Link-Belt Company, Chicago and Philadelphia, Pa.  
◆ Woods, T. B. Sons Co., Chambersburg, Pa.

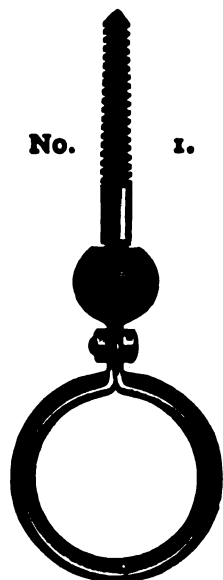
**HANGERS, PIPE.**

- A. B. C.—Fee & Mason Mfg. Co., New York, N. Y.  
Adjustable Clips—Rockwood Sprinkler Co. of Mass., Worcester, Mass.  
Anderson Forge & Machine Co., Detroit, Mich.  
Astoria—Fee & Mason Mfg. Co., New York, N. Y.  
Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Beekman—Fee & Mason Mfg. Co., New York, N. Y.  
Berger—Berger Bros. Co., Philadelphia, Pa.  
Bettcher Mfg. Co., Cleveland, O.  
Blake—Blake Specialty Co., Rock Island, Ill.  
Blake—Blake & Williams, New York, N. Y.  
Carpenter & Paterson, Boston, Mass.  
C.—Crane Co., Chicago, Ill.  
Cenco—E. Erwin Norman Co., Chicago, Ill.  
Chicago Expansion Bolt Co., Chicago, Ill. (expansion bolt).  
Corbin—The Beaton & Corbin Mfg. Co., Southington, Conn.  
Crane Co., Chicago, Ill.  
Crawford & Co., Chicago, Ill.  
Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Dad—D. A. Donovan, Auburn, N. Y.  
Erie—Jarecki Mfg. Co., Erie, Pa.  
Essex Foundry, Newark, N. J.  
F. & M.—Fee & Mason Mfg. Co., New York, N. Y.  
Fit-All—Twisted Wire & Steel Co., New York, N. Y.  
Ford & Kendig Co., Philadelphia, Pa.  
General Fire Extinguisher Co., Providence, R. I.  
Grabler—Grabler Mfg. Co., Cleveland, O.  
Greenlie-Holliday Co., New York, N. Y.  
Guilderland Foundry Co., Guilderland, N. Y.  
Hanna Ball Joint—The Penn Engineering Co., Philadelphia, Pa.  
Heartley Machine, Variety Iron & Tool Works, Toledo, O.  
Hauer, J. B., Brooklyn, N. Y.  
Hoopes & Townsend Co., Philadelphia, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
◆ Jones Improved—The Kelly & Jones Co., Greensburg, Pa.  
Kenway—P. N. Kenway, Boston, Mass.  
Kwickup—Davidson Heating & Construction Co., Hanover, Pa.  
Lane & Bodley Co., The, Cincinnati, O.  
Lisk, Joseph P., Brooklyn, N. Y.  
Malleable—Geo. McCullum, Muskegon, Mich.  
Modern Iron Works, Quincy, Ill. (Plain and gal.)

# Immediate Shipment

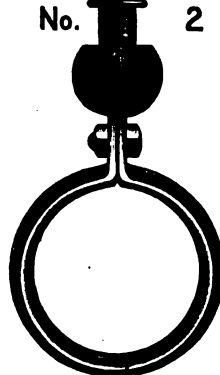


# Hanna Ball Joint Pipe Hangers

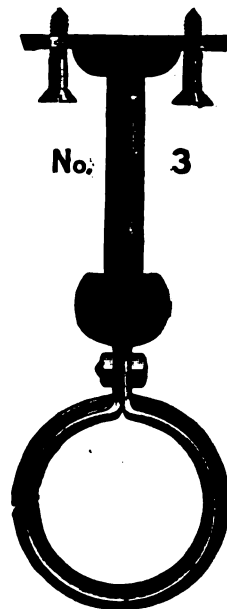


Guaranteed to  
be the strongest  
Pipe Hanger in  
the world

Send for sample  
if you do not  
stock them.



Compare  
them with  
any other  
Hanger  
made



NEW CATALOGUE NOW READY

Manufactured Only by

*The Penn Engineering Co.*

PHILADELPHIA, PA.

Modern Mfg. Co., The, Cleveland, O.  
National—Thos. Devlin Mfg. Co., Philadelphia, Pa.  
Newbury Mfg. Co., Monroe, N. Y.  
O. K.—F. B. Cryer Co., Newark, N. J.  
Orcutt—The Toledo Washer & Stamping Co., Toledo, Ohio.  
Pittsburg Valve & Fittings Co., Barberton, O.  
Pittsburg Valve Fdy. & Const. Co., Pittsburg, Pa.  
Plumbers' Specialty Mfg. Co., St. Louis, Mo.  
Riverside Foundry & Galvanizing Co., Kalamazoo, Mich. (galvanized).  
Robinson Mfg. Co., The, Cleveland, O.  
Russell, W. A., & Co., New York, N. Y.  
Simplex—Hawkins Pump Works, Downers Grove, Ill.  
Steward & Romaine Mfg. Co., Philadelphia, Pa.  
Universal—E. Rutzler Co., New York, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.  
Webco—F. W. Webb Mfg. Co., Boston, Mass.  
Wire Goods Co., The, Worcester, Mass.  
Wizard Mfg. Co., Boston, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.  
Worcester—Rockwood Sprinkler Co. of Mass., Worcester, Mass.  
Wrigley—Thos. Wrigley Co., Chicago, Ill.

#### HANGERS, PIPE, ADJUSTABLE.

Acheson Mfg. Co., Braddock, Pa.  
♦ American District Steam Co., North Tonawanda, N. Y.  
Beaton & Cadwell Mfg. Co., The, New Britain, Conn.  
Carpenter & Paterson, Boston, Mass.  
Cenco—C. Erwin Norman & Co., Chicago, Ill. (steel).  
C.—Crane Co., Chicago, Ill.  
Fee & Mason Mfg. Co., New York, N. Y.  
General Fire Extinguisher Co., Providence, R. I.  
Grinnell Company, Providence, R. I.  
Hanna Ball Joint—Penn Engineering Co., Philadelphia, Pa.  
Kaltenthaler, H. J., Philadelphia, Pa.  
Rees, F. D., Mfg. Co., Beatrice, Neb.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Modern Iron Works, Quincy, Ill.  
Modern Mfg. Co., The, Cleveland, O.  
Morris Adjustable—T. J. Morris, Springfield, Mass.  
Penn—The Penn Engineering Co., Philadelphia, Pa.  
Simplex—Hawkins Pump Works, Downers Grove, Ill.  
Wizard Mfg. Co., Boston, Mass.

#### HANGERS, PIPE, BRASS.

Acme Mfg. Co., Bangor, Me.  
American Brass & Copper Co., The, New York, N. Y.  
Beaton & Cadwell Mfg. Co., The, New Britain, Conn.  
Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Exeter Brass Works, Exeter, N. H.  
Fee & Mason Mfg. Co., New York, N. Y.  
Haskell—E. L. Smith & Co., Boston, Mass.  
O. U.—Van Mfg. Co., Boston, Mass.  
Powhatan Brass & Iron Works, Ranson, W. Va.  
Robinson Mfg. Co., Cleveland, O.  
Van—Van Mfg. Co., Boston, Mass.  
♦ Walworth Mfg. Co., Boston, Mass.  
Webco—F. W. Webb Mfg. Co., Boston, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Wizard Mfg. Co., Boston, Mass.  
Woodward-Wanger Co., Philadelphia, Pa.

#### HANGERS, PIPE, CHAIN.

(See "Chain, for Pipe Hanging.")

#### HANGERS, PIPE, PERFORATED STRAP.

Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Carpenter & Paterson, Boston, Mass.  
Fitall—Twisted Wire & Steel Co., New York.  
Jumbo Heater & Mfg. Co., The, Cleveland, O.  
Modern Mfg. Co., The, Cleveland, O.  
Nortmann-Duffke Co., Milwaukee, Wis.  
Robinson Mfg. Co., The, Cleveland, O.  
Schlud Specialty Co., Cleveland, Ohio.

#### HANGERS AND FLATES, PIPE, HOOK AND EXPANSION.

C.—Crane Co., Chicago, Ill.  
Carpenter & Paterson, Boston, Mass.  
Fee & Mason Mfg. Co., New York, N. Y.  
Galva—Galva Heater Co., Galva, Ill.  
Glenn Mfg. Co., St. Charles, Ill.  
Illinois Malleable Iron Co., Chicago, Ill.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Mac Taggart—Mac Taggart Mfg. Co., Philadelphia, Pa.  
Modern Mfg. Co., The, Cleveland, O.  
Morris Adjustable—T. J. Morris, Springfield, Mass.  
Never-break—The Avery Stamping Co., Cleveland, O.  
Newbury, Jay H., & Son, Goshen, N. Y.  
Newbury Mfg. Co., Monroe, N. Y.

Pittsburg Valve & Fittings Co., Barberton, O.  
 Ravens Iron Co., Ravens, N. Y.  
 Simmons, John, Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**HANGERS, RADIATOR.**

E-Z—Healy-Ruff Co., Minneapolis, Minn.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Rex—Percy N. Kenway, Boston, Mass.

**HANGERS, RANGE BOILER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Saw & Tool Works, Chicago, Ill.  
 Carpenter & Paterson, Boston, Mass.  
 Fee & Mason Mfg. Co., New York.

**HANGERS, SCAFFOLD.**

Jiffy—Paul W. Koch & Co., Chicago, Ill.

**HANGERS, SHAFT, BALL BEARING.**

Gurney Ball Bearing Co., Jamestown, N. Y.  
 Hess-Bright Mfg. Co., Philadelphia, Pa.  
 S K F Industries, Inc., New York, N. Y.  
 ♦ Valley Iron Works, Williamsport, Pa.  
 Wolf Co., The, Chambersburg, Pa.

**HANGERS, SHAFT, BRACKET.**

♦ Hill Clutch Co., The, Cleveland, O.  
 Link-Belt Company Chicago, Ill.  
 ♦ Woods, T. B. Sons Co., Chambersburg, Pa.

**HANGERS, SHAFT, DROP AND POST.**

American—Boston—Giant—American Tool & Machine Co., Boston, Mass.  
 Badger—Badger Gas & Gasoline Engine Co., Kansas City, Kan.  
 Bantam—Standard Pressed Steel Co., Philadelphia, Pa.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Harnard Mfg. Co., Spokane, Wash.  
 ♦ Barry—R. & J. Dick Co., Inc., Passaic, N. J.  
 Bond, B D-S—Bond Foundry & Machine Co., Manheim, Pa.  
 Brightman Machine Co., The, Cleveland, O.  
 Brown Co., The A. F., New York, N. Y.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Caldwell, H. W., & Son Co., Chicago, Ill.  
 Canton Foundry & Machine Co., The, Canton, O.  
 Chicago Pulley & Shafting Co., Chicago, Ill.  
 Christiana Machine Co., Christiana, Pa.  
 Cresson Co., Geo. V., Philadelphia, Pa.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Dow, L. B., Inc., Keene, N. H.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Fall Rivet & Machinery Co., Cuyahoga Falls, O.  
 Franklin Machine Co., Providence, R. I.  
 Fritz, Geo. J., Foundry & Machine Co., St. Louis, Mo.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 Gund Mfg. Co., La Crosse, Wis.  
 ♦ Hercules Duplex, Hercules Hyatt, Standard—Universal—Valley Iron Works, Williamsport, Pa.  
 Hess-Bright Mfg. Co., Philadelphia, Pa.  
 ♦ Hill Collar Oiling—Hill Clutch Co., The, Cleveland, O.  
 Hodson, G. & A., Philadelphia, Pa.  
 Hoppen—J. B. Hoppen & Sons, Belleville, N. J.  
 Howard Iron Works, Buffalo, N. Y.  
 Howard—Olney & Warren, New York, N. Y. (Grease.)  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hunter—James Hunter Machine Co., North Adams, Mass.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Hyatt Roller Bearing Co., New York, N. Y.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 ♦ Jones—Jones, W. A., Foundry & Machine Co., Chicago, Ill.  
 Jones & Laughlin Steel Co., Pittsburg, Pa.  
 ♦ Levalley—Chain Belt Co., Milwaukee, Wis.  
 Link-Belt Company, Chicago and Philadelphia.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 ♦ Madart Patent Pulley Co., St. Louis, Mo.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Monarch—Sprout, Waldron & Co., Muncy, Pa.  
 National Foundry Mfg. & Supply Co., Williamsport, Pa.  
 Naylor Bros., Peekskill, N. Y.  
 ♦ Nordyke & Marmon Co., Indianapolis, Ind.  
 Norrish, Burnham & Co., Glen Rock, Pa.  
 Olney & Warren, New York, N. Y.  
 ♦ Pioneer—Standard Pressed Steel Co., Philadelphia.  
 Pittsburg Gage & Supply Co., Pittsburg, Pa.  
 Poole Engineering & Machine Co., Baltimore, Md.  
 Prescott Geo. W. Co., The, Menominee, Mich.  
 Pyott Co., Chicago, Ill.  
 Reed—Harris & Reed Mfg. Co., Chicago, Ill.  
 ♦ Roller Bearing—Valley Iron Wks., Williamsport, Pa.  
 Roversford Fdy. & Mach. Co., Philadelphia, Pa.  
 S. K. F.—S. K. F. Industries, Inc., New York, N. Y.  
 Salem Foundry & Machine Works, Salem, Va.  
 Schultz, A. L., & Son, Chicago, Ill.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Sprout, Waldron & Co., Muncy, Pa.

♦ Standard—Valley Iron Wks., Williamsport, Pa.  
 U. G.—The Fairbanks Co., New York, N. Y.  
 Upton & Gilman Machine Co., Lowell, Mass.  
 Valley Iron Works, Williamsport, Pa.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 Welch, T. F. & Co., Boston, Mass. (small).  
 Weller Mfg. Co., Chicago, Ill.  
 Wheland, The, Co., Chattanooga, Tenn.  
 ♦ Wolf Co., The, Chambersburg, Pa.  
 ♦ Wood's, T. B. Sons Co., Chambersburg, Pa. Trade names—Wood's Ball & Socket, Peerless, Universal Giant.

**HANGERS, SHAFT, RING OILING.**

American Tool & Machine Co., Boston, Mass.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 ♦ Bond Foundry & Machine Co., Manheim, Pa.  
 Cresson-Morris Co., Philadelphia, Pa.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hansor Clutch & Machinery Co., Tiffin, O.  
 ♦ Hercules—Valley Iron Works, Williamsport, Pa.  
 ♦ Hill Collar Oiling—The Hill Clutch Co., Cleveland, O.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Link-Belt Company, Chicago and Philadelphia.  
 ♦ Madart Patent Pulley Co., St. Louis, Mo.  
 National Foundry Mfg. & Supply Co., Williamsport, Pa.  
 Roversford Foundry & Machine Co., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 ♦ Wood's, T. B. Sons Co., Chambersburg, Pa. Trade names—Wood's Ball & Socket, Peerless.

**HANGERS, SHAFT, SELF OILING.**

American—Boston—Giant—American Tool & Machine Co., Boston, Mass.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 ♦ Hill Clutch Co., The, Cleveland, O.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 ♦ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.  
 ♦ Madart Patent Pulley Co., St. Louis, Mo.  
 Roversford Foundry & Machine Co., Philadelphia, Pa.  
 ♦ Wood's, T. B. Sons Co., Chambersburg, Pa. Trade names—Wood's Ball & Socket, Peerless.

**HANGERS, SHAFT SLING.**

Falls Clutch & Machine Co., Cuyahoga Falls, O.  
 ♦ Woods, T. B. Sons Co., Chambersburg, Pa.

**HANGERS, SHAFT, STEEL.**

Bantam—Standard Pressed Steel Co., Philadelphia, Pa.  
 Barry—Barry Co., Muscatine, Iowa.  
 ♦ Lytestrong—Bond Foundry & Machine Co., Manheim, Pa.  
 Pioneer—Standard Pressed Steel Co., Philadelphia, Pa.

**HANGERS, SPRINKLER.**

Carpenter & Paterson, Boston, Mass.  
 Modern Iron Works, Quincy, Ill.  
 Paine—The Paine Co., Chicago, Ill.

**HANGERS, TRACK, DOOR.**

Myers, F. E., & Bros., Ashland, O.

**HANGERS, FOR TOWEL AND GRIP BARS.**

Rostand Mfg. Co., Milford, Conn.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.

**HAZARDING AND WATERPROOFING MATERIALS FOR CEMENT WORK.**

Agatex—The Truscon Laboratories, Detroit, Mich.  
 Amalgatex—Standard Chemical Corp., Kalamazoo, Mich.  
 Bitu-Mortar Waterproofing Co., New York, N. Y.  
 Ceresitol—Ceresit Waterproofing Co., Chicago, Ill.  
 Concrete Armor—L. A. Lux Co., Cleveland, O.  
 Elaterite Paint & Mfg. Co., The, Des Moines, Ia.  
 Federal Magnesium Fluor Silicate—Federal Process Co., The, Cleveland, O.  
 Flexible Compound Co., The, Philadelphia, Pa.  
 Harrison Bros., Inc., Amesbury, Mass.  
 Indurite (hardener)—Cersit Waterproofing Co., Chicago, Ill.  
 Insulatine—Insulatine Co., New York, N. Y.  
 ♦ J-M—Johns-Manville, Inc., New York, N. Y.  
 Metalcrete—The Klein Mfg. Co., Cleveland, O.  
 Smooth-On Mfg. Co., Jersey City, N. J.  
 Stone-Tex—Truscon Laboratories, The, Detroit, Mich.  
 Texaco—The Texas Co., New York, N. Y.

Toka—National Roofing Co., Tonawanda, N. Y.  
Truscon Floor Hardener—Truscon Laboratories,  
The, Detroit, Mich.

#### **HARDWARE, AWNING.**

Philadelphia Hardware & Malleable Iron Works,  
Philadelphia, Pa.

#### **HARDWARE, BRASS.**

♦ Newman Mfg. Co., Cincinnati, O.

#### **HARDWARE, CASEMENT.**

Air-Way—Richards-Wilcox Mfg. Co., Aurora, Ill.  
Sargent—Sargent & Co., New Haven, Conn.

#### **HARDWARE, FIRE DOOR.**

R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.

#### **HARDWARE, GARAGE DOOR.**

Richards-Wilcox Mfg. Co., Aurora, Ill. Trade names  
—Slidetite, SlydaSyde, CornR-Wise, R-W Par-  
allel, Round-Runner, R-W Flush and Parallel-  
Ideal.

#### **HARDWARE, MARINE.**

Malleable Iron Fittings Co., Branford, Conn.  
Marine Hardware—Equipment Co., South Portland, Me.  
Marine Mfg. & Supply Co., New York, N. Y.  
Page Engineering Co., Baltimore, Md.  
Perko—Perkins Marine Lamp Co., Brooklyn, N. Y.  
Thomas Laughlin Co., The, Portland, Me.  
U. W.—The Upson-Walton Co., Cleveland, O.  
Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### **HARDWARE, POLE AND LINE, GALVANIZED.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
B. & K. Mfg. Co., Milldale, Conn.  
Brooklyn Bolt & Forging Co., East Stroudsburg, Pa.  
Kansas City Bolt & Nut Co., Kansas City, Mo.  
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
St. Louis Malleable Casting Co., St. Louis, Mo.  
St. Louis Screw Co., St. Louis, Mo.  
Western Electric Co., Inc., Chicago, Ill.

#### **HARDWARE, WAGON.**

A-P—Allith-Prouty Co., Danville, Ill.

#### **HATCHETS, LATHING.**

(See also "Axes and Hatchets.")

#### **HAULERS, LOG, STEAM.**

Phoenix, Turret—Phoenix Mfg. Co., Eau Claire,  
Wis.

#### **HAULS, CAR.**

♦ Webster Mfg. Co., The, Chicago, Ill.

#### **HEADERS, BOILER.**

Cornell & Underhill, New York, N. Y.  
National Valve & Mfg. Co., Pittsburgh, Pa.  
Shaw Kendall Engineering Co., Toledo, Ohio.

#### **HEADERS AND MANIFOLDS, PIPE, WROUGHT.**

Albright, Son & Co., Allentown, Pa.  
Cornell & Underhill, New York, N. Y.  
Crane—Crane Co., Chicago, Ill.  
Essex Foundry, Newark, N. J.  
Ford & Kendig Co., Philadelphia, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Kellogg—M. W. Kellogg Co., New York.  
Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
Simmons, John, Co., New York, N. Y.  
Simmons Pipe Bending Works, Newark, N. J.  
Whitlock Coll Pipe Co., Hartford, Conn.

#### **HEADERS AND REHEADERS, BOLT.**

Acme Machinery Co., Cleveland, O.  
Ajax Mfg. Co., The, Cleveland, Ohio.  
Baird Machinery Co., Pittsburgh, Pa.  
Blake & Johnson Co., Waterbury, Conn.  
Boynton & Plummer, Inc., Chester Depot, Vt.  
Davis—The H. B. Brown Co., East Hampton, Conn.  
♦ Green River—Wiley & Russell Mfg. Co., Greenfield,  
Mass.  
Manning, Maxwell & Moore, Inc., New York.  
Manville Machine Co., E. J., Waterbury, Conn.  
National Machinery Co., Tiffin, O.  
Noyes, B. B., Co., Inc., Greenfield, Mass.  
Potts, D. H., Co., Lancaster, Pa.  
Waterbury-Farrell Fdy. & Mach. Co., Waterbury  
Conn.

#### **HEADS, BOILER, FLANGED AND DISHED.**

Glasgow Iron Co., Philadelphia, Pa.  
Lukens Steel Co., Coatesville, Pa.

Midvale Steel & Ordnance Co., Philadelphia, Pa.  
Munroe, R., & Sons Mfg. Corp., Pittsburg, Pa.

#### **HEADS, BOLT, BRASS.**

Columbus Brass Co., Columbus, O.

#### **HEADS, BOLT, PORCELAIN, FOR CLOSET SCREWS, ETC.**

Hutter, Karl, Inc., New York, N. Y.  
Maddocks, Thos., & Sons Co., Trenton, N. J.

#### **HEADS, BORING.**

Casler—Marvin & Casler Co., Canastota, N. Y.  
Madison Adjustable—Madison Mfg. Co., Muskegon,  
Mich.  
Porter Cable Machine Co., Syracuse, N. Y.  
Rickert-Shafer—Rickert-Shafer Co., Erie, Pa. (ad-  
justable offset).

#### **HEADS, CASING.**

McEwen Mfg. Co., Tulsa, Okla.

#### **HEADS, CLOSET BOLT AND SCREW.**

American Pin Co., Waterbury, Conn.  
Ansonia Mfg. Co., Ansonia, Conn.  
Glauber Brass Mfg. Co., Cleveland, Ohio.

#### **HEADS, CONDENSER.**

Morgan-Clark System Co., Rochester, N. Y. (vacuum  
pump).

#### **HEADS, CUTTER, WOODWORKING.**

American Woodworking Machinery Co., Rochester.  
♦ Atkins, E. C., & Co., Indianapolis, Ind.  
Bentel & Margendant Co., Hamilton, O.  
Buettner & Shelbourne Machine Co., Terre Haute, Ind.  
Concave—Morris L. Orum, Philadelphia, Pa.  
Fay, J. A. & Egan Co., Cincinnati, O.  
Fox Machine Co., Grand Rapids, Mich.  
Gage, E. E., Mfg. Co., Gardner, Mass.  
Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.  
Lamson Cutter Head Co., Chicago, Ill.  
Mattison—C. Mattison Machine Works, Beloit, Wis.  
Oliver Machinery Co., Grand Rapids, Mich.  
Philbrick Cutter Head Co., Seattle, Wash.  
Schellenbach-Hunt Tool Co., Cincinnati, O.  
Shimer, Samuel J. & Sons, Milton, Pa.  
Smith, H. B., Machine Co., Smithville, N. J.  
Thompson, W. S., New York, N. Y.  
Woods, S. A., Machine Co., Boston, Mass.

#### **HEADS, DIE.**

Adjustable Collet Co., Cleveland, O.  
Boehm, Automatic—Rickert-Shafer Co., Erie, Pa.  
Direct Separator Co., The, Syracuse, N. Y.  
Eclipse—Standard Gauge Mfg. Co., Foxboro, Mass.  
Elliott—Elliott Co., Pittsburg, Pa.  
Everlast—Franklin Williams, New York, N. Y.  
Exeter Machine Works, Exeter, N. H.  
♦ Gardner Governor Co., The, Quincy, Ill.  
♦ Geometric—The Geometric Tool Co., New Haven.  
Herbert, Alfred, Ltd., New York, N. Y.  
H. & G.—Eastern Machine Screw Corp., New Haven,  
Conn.  
Ideal—Ideal Foundry & Machinery Co., Beaver  
Falls, Pa.  
Jarecki—Jarecki Mfg. Co., Erie, Pa.  
Landis Machine Co., Waynesboro, Pa. (bolt and pipe  
threading).  
♦ Little Giant—Greenfield Tap & Die Corp., Greenfield,  
Mass.  
Modern—Modern Tool Co., Erie, Pa.  
♦ Murchey Machine & Tool Co., Detroit, Mich.  
Namco—National Acme Co., Cleveland, O.  
Pratt & Whitney Co., Hartford, Conn.  
Victor Tool Co., Waynesboro, Pa.

#### **HEADS, DIVIDING (FOR TOOL ROOMS).**

Rockford—Rockford Milling Machine Co., Rockford,  
Ill.  
Steptoe—John Steptoe Co., Cincinnati, Ohio.  
Whiting & Comstock, Hartford, Conn.

#### **HEADS, DIVIDING, UNIVERSAL.**

Dickow's—Fred C. Dickow Machinery Co., Inc., Chi-  
cago, Ill.  
Willard—Willard Press & Tool Co., The, Cincinnati,  
Ohio.

#### **HEADS, DOWN SPOUT, CAST IRON.**

Wade Iron Sanitary Mfg. Co., Chicago, Ill.

#### **HEADS, DRILL, ADJUSTABLE AND FIXED CENTER.**

Buhr—Nelson-Blanck Mfg. Co., Detroit, Mich.  
Sellew Machine Tool Co., Pawtucket, R. I.

**HEADS, DRILL, MULTIPLE SPINDLE.**

United States Drill Head Co., Cincinnati, O.

**HEADS, DRILLING, AUXILIARY.**

Hoefler Mfg. Co., Freeport, Ill.  
 Redin, Ekstrom & Co., Rockford, Ill.  
 Sellow—Sellow Machine Tool Co., Pawtucket, R. I.  
 Spafford Tool Works, Hartford, Conn.  
 Superior—Superior Machine & Engineering Co., Detroit, Mich.

**HEADS, EXHAUST PIPE—CAST IRON AND GALVANIZED.**

American—Whitlock Coil Pipe Co., Hartford, Conn.  
 A. S. P. W.—American Spiral Pipe Works, Chicago.  
 Bonar—James Bonar & Co., Pittsburg, Pa.  
 ♦ Burt—Burt Mfg. Co., Akron, O.  
 Champion—Chicago Engineer Supply Co., Chicago.  
 Common Sense—Strandwitz & Scott, Camden, N. J.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Cornell & Underhill, New York.  
 Cyclone—Wright-Austin Co., Detroit, Mich.  
 Direct Separator Co., The, Syracuse, N. Y.  
 Emil Hald Blow Pipe Works, Brooklyn, N. Y.  
 Everlast—Franklin Williams, Inc., New York.  
 Hartford Blower Co., The, Hartford, Conn.  
 Hoppes—The Hoppes Mfg. Co., Springfield, O.  
 Hudson—Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Neverust—Franklin Williams, Inc., New York, N. Y.  
 ♦ Ohio Body & Blower Co., Cleveland, O.  
 Patterson—Patterson-Kelley Co., The, New York, N. Y.  
 Philadelphia Pipe Bending Co., The, Philadelphia, Pa.  
 Pittsburgh Valve Fdy. & Const. Co., Pittsburg, Pa.  
 Prentice—L. H. Prentice Co., Chicago, Ill.  
 Ringen—Sodemann Heat & Power Co., St. Louis, Mo.  
 Root—Abendroth & Root Mfg. Co., Newburgh, N. Y.  
 Royal—Royal Ventilator Co., Philadelphia, Pa.  
 Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Rutzler—E. Rutzler Co., New York, N. Y.  
 Simmons Pipe Bending Works, Newark, N. J.  
 Simonds—Simons Heating & Specialty Co., Detroit.  
 Simplex—Virginia Blower & Heater Co., Inc., Richmond, Va.  
 Skinner Bros. Mfg. Co., St. Louis, Mo.  
 ♦ Standard—Burt Mfg. Co., Akron, O.  
 Sterling—The Sterling Blower & Pipe Mfg. Co., Hartford, Conn.  
 ♦ Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 ♦ Swartwout—Ohio Body & Blower Co., Cleveland, O.  
 Taylor Steam Specialty Co., Battle Creek, Mich. (cast iron.)  
 Thermo—Illinois Engineering Co., Chicago, Ill.  
 Tip-top—Boylston Steam Specialty Co., Chicago, Ill.  
 Triumph Steam Appliance Co., The, West Allis, Wis.  
 Utility—Standard Steam Specialty Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wright-Austin—Wright-Austin Co., Detroit, Mich.

**HEADS, FACING.**

Mummert-Dixon Co., Hanover, Pa.

**HEADS, GRINDING AND POLISHING.**

American Grinder Mfg. Co., Milwaukee, Wis.  
 Builders Iron Foundry Co., Providence, R. I.  
 ♦ Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Coates—Coates Clipper Mfg. Co., Worcester, Mass.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Ielman Bros., Newark, N. J.  
 Millers Falls Co., Millers Falls, Mass.  
 ♦ Partridge, E. O., Chicago.  
 ♦ St. Louis—Western—St. Louis Machine Tool Co., St. Louis, Mo.  
 ♦ Wells—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Welch, T. F., & Co., Boston, Mass.

**HEADS, HYDRANT, FIRE, PORTABLE.**

Vulcan—Ross Valve Mfg. Co., Troy, N. Y.

**HEADS, INDEX, UNIVERSAL.**

Simmons Machine Co., Inc., Albany, N. Y.

**HEADS, SHOWER BATH.**

Boekel & Co., Wm., Philadelphia, Pa.  
 Chesco—Chas. Hess Co., New York, N. Y. (oval).  
 Curtainless Shower Co., New York, N. Y.  
 Elgin Brass Co., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Hoffman & Billings Mfg. Co., Milwaukee, Wis.  
 Imperial Brass Mfg. Co., Chicago, Ill.  
 Jenkins Mfg. Co., New York, N. Y.  
 Kas-Bras—Speakman Co., Wilmington, Del.  
 Lehnert & Co., New York, N. Y.  
 Meyer-Sniffen Co., The, New York, N. Y.

M-VB Temporator—Sturgis Company, Sturgis, Mich.  
 Milwaukee Flush Valve Co., Milwaukee, Wis.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 New Jersey Tube Co., New York.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Newton—Providence Steam Trap Co., Providence, R. I.  
 Sanitas Mfg. Co., Boston, Mass.  
 Smith, E. C., Mfg. Co., Chicago, Ill.  
 Taylor, George, Brass & Bronze Works, Inc., New York, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.

**HEADS, SPRAY.**

Yarway—Yarnall-Waring Co., Philadelphia, Pa.

**HEADS, SPRINKLER.**

(See "Sprinklers, Automatic Fire.")

**HEADS, STOPPER, LADLE.**

R. B. Seidel, Inc., Philadelphia, Pa.

**HEADS, TAPPING, AUTOMATIC REVERSE.**

Buhr—Nelson-Blanck Mfg. Co., Detroit, Mich.

**HEADS, TURRET, FOR LATHES.**

(See also "Holders, Tool.")

Almond, T. R., Mfg. Co., Ashburnham, Mass.  
 Cincinnati Lathe & Tool Co., Cincinnati, Ohio.  
 Meisselbach-Catucci Mfg. Co., Newark, N. J.  
 Newman Mfg. Co., Cincinnati, O.  
 Scotttools—Keystone Equipment Co., Philadelphia, Pa.  
 Turner, Quint Turret—Turner Machine Co., Danbury, Conn.

**HEADS, WORKING.**

(See "Pumps, Artesian or Deep Well.")

**HEADLIGHTS, LOCOMOTIVE.**

American Safety Lamp & Mine Supply Co., Scranton.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Buda-Ross—The Buda Co., Chicago, Ill. (electric).  
 Dayton Mfg. Co., Dayton, Ohio.  
 General Electric Co., The, Schenectady, N. Y.  
 Milburn—Alexander Milburn Co., Baltimore, Md.

**HEATERS, AIR, FOR DRYING PURPOSES.**

Improved Appliance Co., Brooklyn, N. Y.  
 Rockwell—W. S. Rockwell Co., New York, N. Y.  
 Skinner Bros. Mfg. Co., St. Louis, Mo.

**HEATERS, ASPHALT AND TAR.**

Aeroil—Aeroil Burner Co., Inc., Union Hill, N. J.  
 American Road Machinery Co., Groton, N. Y.  
 Biehl Iron Works, Inc., The, Reading, Pa.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Billow—National Supply Co., Chicago, Ill.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Canton Boiler & Engineering Co., Canton, O.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Evans, Estate, F. H., Brooklyn, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kennicott Co., Chicago, Ill.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Koven & Bro., L. O., New York, N. Y.  
 Littleford Bros., Cincinnati, O.  
 Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
 Macleod & Co., Cincinnati, O.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Phillips, Doup and Co., Inc., Brooklyn, N. Y.  
 Pluto—Chausse Mfg. Co., Highland Park, Mich.  
 Sperry, D. R., & Co., Batavia, Ill.

**HEATERS, BRASS, COIL.**

Weld, Geo. A., & Co., Boston, Mass.

**HEATERS, CANPY MAKING.**

Improved Appliance Co., Brooklyn, N. Y.

**HEATERS, CLOSET VENT STACK.**

American Warming & Vent Co., Elmira, N. Y.  
 Ebco—The D. A. Ebinger Sanitary Mfg. Co., Columbus, Ohio.

**HEATERS, ELECTRIC, HOUSE.**

(See also Radiators, Electric.)

Automatic Electric Heater Co., Warren, Pa.  
 Edison Electric Appliance Co., Inc., Chicago, Ill.  
 Estate Stove Co., The, Hamilton, O.  
 Glolog—Straight & Richards, Inc., Newark, N. J. (logs fireplace).  
 Majestic Electric Development Co., Philadelphia, Pa.  
 Rutenber Electric Co., Marion, Ind.  
 Space Heaters—Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
 Universal—Landers, Frary & Clark, New Britain, Conn.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**HEATERS, FEED WATER.**

Alberger Heater Co., Buffalo, N. Y.  
 Alberger Pump & Condenser Co., New York.  
 American Berryman and American Standard—Whitlock Coil Pipe Co., Hartford, Conn.  
 Bass Foundry & Machine Co., Fort Wayne, Ind.  
 Bate & Son, W. T. Conshohocken, Pa.  
 Berryman—Pratt & Cady Co., Inc., Hartford, Conn.  
 Berryman—Patterson-Kelley Co., The, New York, N. Y.  
 Biggs Boiler Works Co., The, E. Akron, O.  
 Blackburn—James Beggs & Co., New York.  
 Blake Mfg. Co., Geo. F., New York, N. Y.  
 Borromite Co. of America, The, Chicago, Ill.  
 Brownell Co., The, Dayton, O.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Colles Heater & Specialty Co., Chicago, Ill.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Eclipse—Eclipse Feed Water Heater & Purifier Co., Oshkosh, Wis.  
 Elliott—Elliott Co., Jeannette, Pa.  
 Erie City Iron Works, Erie, Pa.  
 Freeman Mfg. Co., Racine, Wis.  
 Frost Mfg. Co., Galesburg, Ill.  
 Garrett, W. D., & Co., New York.  
 Gleener—Pratt & Cady Co., Inc., Hartford, Conn.  
 Goubert—A. A. Goubert, New York.  
 Goubert, Multipass—Griscom & Russell Co., New York, N. Y.  
 Graver Tank Works, Wm., East Chicago, Ind.  
 Harris—Arthur Harris & Co., Chicago, Ill.  
 Harrisburg—Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 ♦ Houston, Stanwood & Gamble Co., Cincinnati, O.  
 Hussey McCann & Co., New York, N. Y.  
 Jacobs & Co., Chas., Boston, Mass.  
 Keeler Co., E., Williamsport, Pa.  
 Kelley-Berryman—Patterson-Kelley Co., The, New York, N. Y.  
 Kilemul—Kieley & Mueller, New York, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Linton—Ernst & Co., Newark, N. J.  
 Massillon—Griscom-Russell Co., New York, N. Y.  
 Moffat—The Dayton Steam Boiler Wks., Dayton, O.  
 Murray Iron Works Co., Burlington, Iowa.  
 National—The National Pipe Bending Co., New Haven, Conn.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Organ—Exeter Machine Works, Pittston, Pa.  
 Park Mfg. Co., The, Charlotte, N. C.  
 Patterson-Kelley Co., The, New York, N. Y.  
 R & D Paracoll—Row & Davis, Engineers, Inc., New York, N. Y.  
 Reilly, Multicoll—Griscom-Russell Co., New York, N. Y.  
 Reilly Multiscreen—Griscom-Russell Co., New York, N. Y.  
 Reliance—Milwaukee Reliance Boiler Works, Milwaukee, Wis.  
 Riblet—Erie Mfg. & Supply Co., Erie, Pa.  
 Ross—Ross Heater & Mfg., Buffalo, N. Y.  
 Ross—Ross Mfg. Co., The, Northville, Mich.  
 Sims—The Sims Co., Erie, Pa.  
 Sioux City Boiler & Sheet Iron Works, Sioux City, Ia.  
 S. & K.—Schutte & Koerting Co., Philadelphia, Pa.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Standard Multicoll—Standard Water System Co., Hampton, N. J.  
 Steam Jacket—Wm. Baragwanath & Son, Chicago, Ill.  
 Superheater Co., The, New York, N. Y.  
 ♦ Swartwout—Ohio Body & Blower Co., Cleveland, Ohio.  
 Torrid—Alonso Hoover & Son, Hackettstown, N. J.  
 Tripure—Standard Water Systems Co., Hampton, N. J.  
 Tudor Boiler Mfg. Co., The, Cincinnati.  
 Utility—Standard Steam Specialty Co., New York.  
 Water—Power Plant Specialty Co., Chicago, Ill.  
 Wainwright—Alberger Pump & Condenser Co., New York, N. Y.  
 Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.  
 Webster—Warren Webster & Co., Camden, N. J.  
 Weld, Geo. A., & Co., Boston, Mass.  
 C. H. Wheeler—C. H. Wheeler Mfg. Co., Philadelphia.  
 Wheeler—The Wheeler Condenser & Engineering Co., New York, N. Y.  
 Wickes Boiler Co., The, Saginaw, Mich.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**HEATERS AND PURIFIERS, FEED WATER**

Alberger Heater Co., Buffalo, N. Y.  
 Bayer Steam Soot Blower Co., St. Louis, Mo.  
 Berry—The Berry Engineering Co., Chester, Pa.  
 Bonar—James Bonar & Co., Pittsburg, Pa.  
 Borromite—Borromite Co. of America, Chicago, Ill.  
 Bros, Wm., Boiler & Mfg. Co., Minneapolis, Minn.  
 Cochrane—Harrison Safety Boiler Works, Philadelphia, Pa.  
 Cookson—Bates Machine & Tractor Co., Joliet, Ill.  
 Electric Water Sterilizer & Ozone Co., Scottsdale, Pa.  
 ♦ Eureka—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Frost Mfg. Co., Galesburg, Ill.  
 Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 Hoppes—The Hoppes Mfg. Co., Springfield, O.

H. S. G.—Houston, Stanwood & Gamble Co., Cincinnati.  
 Kieley—Kieley & Mueller, New York.  
 Linton—The Linton Machine Co., New York, N. Y.  
 Mertes—The Milwaukee Boiler Co., Milwaukee, Wis.  
 Milwaukee Boiler Mfg. Co., The, Milwaukee, Wis.  
 Moffat—The Dayton Steam Boiler Works, Dayton, O.  
 Munroe, R., & Sons Mfg. Corp., Pittsburg, Pa.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Otis—King Construction Co., North Tonawanda, N. Y.  
 Otis—Stewart Heater Co., Buffalo, N. Y.  
 Pittsburg—James Bonar & Co., Pittsburg, Pa.  
 Seale, Wm. B., & Sons Co., Pittsburg, Pa.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Sims—The Sims Co., Erie, Pa.  
 Steam Appliance Mfg. Co., Batavia, N. Y.  
 Stillwell—The Platt Iron Works Co., Dayton, O.  
 Webster—Warren Webster & Co., Camden, N. J.  
 Worthington Pump and Machinery Corp., New York.

**HEATERS, FEED WATER, OPEN.**

Cochrane—Harrison Safety Boiler Works, Philadelphia, Pa.  
 Colles Heater & Specialty Co., Chicago, Ill.  
 Garrett, W. D., & Co., New York, N. Y.  
 King Construction Co., North Tonawanda, N. Y.  
 Massillon—Griscom-Russell Co., New York.  
 Sickie—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Sims—The Sims Co., Erie, Pa.  
 Stickle—John Simmons Co., New York, N. Y.  
 Whitlock Open Exhaust—Whitlock Coil Pipe Co., Hartford, Conn.  
 Wickes Bros., Saginaw, Mich.

**HEATERS, FIREPLACE, GAS.**

Charm, Eclipse, Grand—The S. B. Sexton Stove & Mfg. Co., Baltimore, Md.  
 Economy—Economy Stove Co., The, Cleveland, O.  
 Garwood Gas Lamp & Heater Co., Canton, O.  
 Grand Domestic, Windsor, Gem A, Gem B, Magic A, Magic B, Trade names—Bartlett-Hayward Co., Baltimore, Md.  
 Hot Spot—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.  
 Inaugural, Model-Heater—The S. B. Sexton Stove & Mfg. Co., Baltimore, Md.  
 Iron-ton—The Iron-ton Stove & Mfg. Co., Iron-ton, O.  
 Mead—Mead Gas Heater Co., New York, N. Y.  
 Radiantfire—General Gas Light Co., Kalamazoo, Mich.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.  
 Reznor—Reznor Manufacturing Co., Mercer, Pa.  
 Solar Grand—Sanitary Heating Co., Brooklyn, N. Y.  
 Spear Stove & Heating Co., James, Philadelphia, Pa.  
 Superior—The Superior Mfg. Co., N. S. Pittsburg, Pa.  
 Victor—S. B. Sexton Stove & Mfg. Co., Baltimore.  
 Wilson & Daum Co., Pittsburg, Pa. (Trade names—Admiral, President, Regent, Sherwood, Regina, Sussex).

**HEATERS, FUEL OIL.**

Lalor Fuel Oil System Co., Baltimore, Md.  
 Lockett & Co., Ltd., A. M., New Orleans, La.  
 National—National Pipe Bending Co., New Haven, Conn.  
 R & D Paracoll—Row & Davis Engineers, Inc., New York.  
 Tread-Kill—M. H. Treadwell Company, New York, N. Y.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 White—White Fuel Oil Engineering Corp., New York.

**HEATERS, GARAGE.**

Age Gar—The John E. Mannen Co., Cleveland, O. (gas).  
 Canton Clothes Dryer Co., Canton, Ohio.  
 Franklin—The Trolley Supply Co. (Gas Appliance Dept.), Massillon, O.  
 Fuller & Warren Co., Troy, N. Y.  
 Gas Appliance Co., Cleveland, O.  
 High Efficiency—Gas Appliance Co. (gas), Cleveland, O.  
 Jumbo—Jumbo Heater & Mfg. Co., The, Cleveland, Ohio.  
 Kidde Co., New York, N. Y.  
 Lattner—P. M. Lattner Mfg. Co., Cedar Rapids, Ia.  
 Neverout Patent—Rose Mfg. Co., Philadelphia, Pa.  
 Rex—The Cleveland Heater Co., Cleveland, O.  
 Rose Mfg. Co., Philadelphia, Pa. (kerosene)  
 Scientific—Scientific Heater Co., Cleveland, O.  
 Superior—Superior Mfg. Co., N. S. Pittsburg, Pa.  
 Thatcher Furnace Co., New York, N. Y.  
 Wasco (hot water)—W. A. Schleit Mfg. Co., Inc., Syracuse, N. Y.  
 Wise Furnace Co., Akron, O.

**HEATERS AND POTS, GLUE.**

Advance-Wetmore—New Advance Machinery Co., Van Wert, O.



American Electrical Heater Co., Detroit, Mich.  
Automatic Electric Heater Co., Warren, Pa.  
Dart, E. M., Mfg. Co., Providence, R. I.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Francis Co., Chas. E., Rushville, Ind.  
General Electric Co., Schenectady, N. Y.  
Grammes, L. F., & Sons, Allentown, Pa.  
Improved—Cincinnati Glue Heater Co., Cincinnati, O.  
International Electric Co., Indianapolis, Ind.  
Koven, L. O., & Bro., Jersey City, N. J.  
Nason Mfg. Co., New York, N. Y., (gas and steam).  
Obermayer, S. Co., The, Cincinnati, Ohio.  
Oliver Machinery Co., Grand Rapids, Mich.  
Shawmut—Braman, Dow & Co., Boston, Mass.  
Simplex Electric Heating Co., The, Cambridge, Mass.  
Smith, P. J., Machinery Co., Bay City, Mich.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**HEATERS, HOT WATER.**

(See "Boilers, Heating, Steam and Hot Water," and "Generators, Hot Water.")

**HEATERS, JUICE.**

Ross Heater & Mfg. Co., Buffalo, N. Y.  
Treadwell, M. H., Co., Inc., New York.

**HEATERS, LADLE.**

Tropenas Co., Brooklyn, N. Y.  
U. S.—United States Smelting Furnace Co., Belleville, Ill.

**HEATERS, LAUNDRY.**

(See "Stoves, Laundry.")

American—American Foundry & Mfg. Co., St. Louis, Mo.  
Sims Co., The, Erie, Pa.  
Whitlock—American—Whitlock Coil Pipe Co., Hartford, Conn.

**HEATERS, MELTING POT, ELECTRIC.**

C-H—Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
General Electric Co., Schenectady, N. Y.

**HEATERS, RAILWAY CAR.**

Dayton Mfg. Co., The, Dayton, O.  
Gold Car Heating & Lighting Co., Brooklyn, N. Y.

**HEATERS, RANGE BOILER AND TANK.**

Bridgeport—The Bridgeport Water Heater Co., Bridgeport, Conn.  
Cino—Specialty Device Co., The, Cincinnati, O.  
Koven, L. O., & Bro., Jersey City, N. J.  
Maywood Water Heater Co., Maywood, Ill.  
Meerhoff—Meerhoff, Wm. H., Richmond, Ind.  
Perkins—Oliver & Howland Co., Springfield, Mass.  
R. & F.—Ryan & Fitzpatrick Specialty Co., Troy, N. Y.  
Royal, Superior Duplex, Keystone, Marvel—Bastian—Morley Co., La Porte, Ind.  
Ruud—Ruud Mfg. Co., Pittsburgh, Pa.  
The X—X Specialty Co., Taunton, Mass.

**HEATERS, FOR SHOWER BATHS.**

Economic, Efficient, Security, Tobey—The J. L. Mott Iron Works, Trenton, N. J.  
Matthews, W. N., & Brother, Inc., St. Louis, Mo.

**HEATERS, SOLAR OR SUN RAY.**

Day & Night Solar Heater Co., Monrovia, Cal.  
Climax, Improved Climax—Solar Heater Co., Ltd., Los Angeles, Cal.

**HEATERS, STEAM, WITH BLOWER.**

Baetz—Skinner Bros. Mfg. Co., St. Louis, Mo.  
Massachusetts Blower Co., Watertown, Mass.

**HEATERS, STEAM.**

(See "Boilers, Heating, Steam.")

**HEATERS, TANK, STEAM JET.**

◆ Adsc—American District Steam Co., North Tonawanda, N. Y.  
◆ American Injector Co., Detroit, Mich.  
Berryman—Ernst & Co., Newark, N. J.  
Capitol, Triton—U. S. Radiator Corp., Detroit, Mich.  
Cartwright & Caps Co., Chicago, Ill.  
Central Station Steam Co., Detroit, Mich.  
Crescent—W. H. Pearce & Co., Chicago, Ill.  
Economy Faucet Co., Providence, R. I.  
Go-Ro—Go-Ro Mfg. Co., New Orleans, La.  
Hancock—Hancock Inspirator Co., The, New York, N. Y.  
Hennebelle Co., Chicago, Ill.  
Koerting—Schutte-Koerting Co., Philadelphia, Pa.  
Lee—United Brass & Aluminum Mfg. Co., Port Huron, Mich.  
Meyers—Meyers Manufacturing Co., Columbia, Pa.  
◆ Penberthy—Penberthy Injector Co., Detroit, Mich.

Pheaton Heater Co., Peekskill, N. Y.  
Rugby—J. H. McLain Co., Canton, O.  
Sanos—Jenkins Mfg. Co., New York, N. Y.  
◆ Sims—The Sims Co., Erie, Pa.  
Starwell—Warlic Heater Mfg. Co., St. Louis, Mo.  
York—Abendroth Bros., Port Chester, N. Y.

**HEATERS, TANK, STOCK WATERING**

Acme—Cedar Rapids Pump Co., Cedar Rapids, Ia.  
American—American Gas Machine Co., Albert Lee, Minn.  
American—American Scale Co., Kansas City, Mo.  
Badger—Duplex Mfg. Co., Superior, Wis.  
Beatrice—Dempster Mill Mfg. Co., Beatrice, Nebr.  
Black Jack—Hunt, Helm, Ferris Co., Harvard, Ill.  
B. M. C.—Butler Mfg. Co., Kansas City, Mo.  
Bogue—Wensley Lead Co., Denver, Colo.  
Bryan Plow Co., Bryan, O.  
Busby—C. W. Busby & Co., Washington, Iowa.  
Capital, Victor, Boss—Dempster Mfg. & Supply Co., Des Moines, Ia.  
Cedar Rapids—Cedar Rapids Pump Co., Cedar Rapids, Iowa.  
Cedar Rapids Foundry & Machine Co., Inc., Cedar Rapids, Ia.  
Cracker Jack—Hunt, Helm, Ferris Co., Harvard, Ill.  
Dandy—Challenge Co., Batavia, Ill.  
Dohm—Dane Mfg. Co., Dane, Wis.  
Duluth Corrugating & Roofing Co., Duluth, Minn.  
Eureka—Smith & Pomeroy Windmill Co., Kalamazoo, Mich.  
Everlasting—Heeson Bros. & Co., Tecumseh, Mich.  
Fairbanks, Morse & Co., Chicago, Ill.  
Fetzer, Wm. Co., Springfield, Ill.  
Florence—Central Oil & Gas Stove Co., Gardner, Mass.  
Greenville Implement Co., Greenville, Mich.  
Grub—Drew Elevated Carrier Co., Waterloo, Ia.  
Harvard—Hunt, Helm, Ferris Co., Harvard, Ill.  
Hawkeye—Cascade Mfg. Co., Waterloo, Ia.  
Hayward and Hot Stuff—Butler Co., The, Butler, Ind.  
Hayward—Butler Co., Butler, Ind.  
Hooker—O. V. Hooker & Son, St. Johnsbury, Vt.  
Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
Hot Stuff—Butler Co., Butler, Ind.  
Iron King—Hunt, Helm, Ferris Co., Harvard, Ill.  
I. X. L.—U. S. Wind Engine & Pump Co., Batavia, Ill.  
Kelly Mfg. Co., Waterloo, Ia.  
Kelly Foundry & Machine Co., Goshen, Ind.  
Kent Mfg. Co., Ft. Atkinson, Wis.  
Klondike—Butler Co., Butler, Ind.  
Madison—Wisconsin Foundry & Machine Co., Madison, Wis.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Monarch—Zimmerman Mfg. Co., Auburn, Ind.  
Monitor—Baker Mfg. Co., Evansville, Wis.  
Mudgett—Sargent, Osgood & Roundy Co., Randolph, Vt.  
Napoleon—Heller Aller Co., Napoleon, O.  
Nappanee—Brown Bros. Mfg. Co., Nappanee, Ind.  
National Steel Tank Co., Niles, Mich.  
Nelson Mfg. Co., Deerfield, Wis.  
New Era—Butler Mfg. Co., Kansas City, Mo.  
New Rinkle—Hunt-Helm-Ferris & Co., Harvard, Ill.  
Northwestern Steel & Iron Works, Eau Claire, Wis.  
Perfection—Challenge Co., Batavia, Ill.  
Perfection—Hunt, Helm, Ferris & Co., Harvard, Ill.  
Perkins Windmill Co., Mishawaka, Ind.  
Record—Freeland, B. F., Sons Co., Sturgis, Mich.  
Red Cross Mfg. Co., Bluffton, Ind.  
Red Hot—Hunt, Helm, Ferris Co., Harvard, Ill.  
Samson—Phelps-Bigelow Windmill & Mfg. Co., Kalamazoo, Mich.  
Sandwich Mfg. Co., Sandwich, Ill.  
Star—Hunt, Helm, Ferris & Co., Harvard, Ill.  
Star—Freeland, B. F., Sons Co., Sturgis, Mich.  
Standard—Hunt, Helm, Ferris & Co., Harvard, Ill.  
Sun—Pittsburg Steel Tank Co., Pittsburg, Pa.  
Superior—Duplex Mfg. Co., Superior, Wis.  
Swift Mfg. Co., Waterloo, Ia.  
Treaty Co., The, Greenville, Ohio.  
Twentieth Century—Butler Co., Butler, Ind.  
Washout—Crestline Mfg. Co., Crestline, O.  
Wisconsin Foundry & Machine Co., Madison, Wis.

**HEATERS, TAR.**

(See "Heaters, Asphalt and Tar")

**HEATERS, TOOL.**

Phisto—Chausse Mfg. Co., Highland Park, Mich.

**HEATERS, "U" BEND.**

National Pipe Bending Co., New Haven, Conn.

**HEATERS, UNIT.**

Haines Co., The, Chicago, Ill.  
Ilgaier—Ilga Electric & Ventilating Co., Chicago, Ill.  
Scruplex—L. J. Wing Mfg. Co., New York.

**HEATERS, WAGON TIRE.**

Improved Appliance Co., Brooklyn, N. Y.  
Rochester—West Tire Setter Co., The, Rochester, N. Y.

**HEATERS, WATER, ACETYLENE GAS.**

Hercules—Hercules Mfg. Co., Chattanooga, Tenn.

**HEATERS, WATER, AUXILIARY, FOR FURNACES AND BOILERS.**

American Auxiliary Heater Co., Boston, Mass.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Bachmann—Bachmann Bros., La Porte, Ind.  
 Bachmann Water Heater, LaPorte, Ind.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Boynton—The Boynton Furnace Co., New York, N. Y.  
 Burt—White Mfg. Co., Newark, N. J.  
 Champion—Melbye Bros. Co., Chicago, Ill.  
 Crescent—Charles Dargent, Brooklyn, N. Y.  
 Denslow Heating Co., Waverly, N. Y.  
 Excelso—Excelso Specialty Works, Buffalo, N. Y.  
 F. A. T.—Frederick A. Tyler, Albany, N. Y.  
 Gem—Davidson Heating & Construction Co., Hanover, Pa.  
 Gblin—Gblin & Co., Utica, N. Y.  
 Holden—B. & F. Manufacturing Co., Inc., Indianapolis, Ind.  
 Mueller Furnace Co., L. J., Milwaukee, Wis.  
 Pheaton Heater Co., Peekskill, N. Y.  
 Putnam—Putnam Foundry & Machine Co., Putnam, Conn.  
 R. & F. Generator—Ryan & Fitzpatrick Co., Inc., Troy, N. Y.  
 Tyler's—Frederick A. Tyler, Albany, N. Y.

**HEATERS, WATER, ELECTRIC.**

American Beauty—American Electrical Heater Co., Detroit.  
 Aqua—Aqua Electric Heater Co., New York.  
 Automatic Electric Heater Co., Warren, Pa.  
 C-H—The Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
 Diamond—Diamond Electric Water Heater Co., San Francisco, Cal.  
 Edison Electric Appliance Co., Inc., Chicago, Ill.  
 Electric Boillette—Electric Boiler Corp., Cambridge, Mass.  
 Electro-Boil—Milwaukee Mfg. Co., Milwaukee, Wis.  
 Grinnell Electric Heater Co., Grinnell, Ia.  
 Hot-Flow Electric Faucet—Hot-Flow Faucet Corp., New York, N. Y.  
 Hotwat—Hotwat Distributing Co., Los Angeles, Calif.  
 Insto—Woche, Max & Son Co., The Cincinnati, O.  
 Majestic—Majestic Electric Development Co., Philadelphia, Pa.  
 Reimers Mfg. Co., New York, N. Y.  
 Sanos—Jenkins Mfg. Co., New York, N. Y.  
 Stubin Geyser Electric Water Heater Co., Steubenville, O.

**HEATERS, WATER, GAS, FOR BARBERS.**

Duluth—Duluth Water Heater Co., Duluth, Minn.  
 Economy, Perfection, Proviso—Maywood Water Heater Co., Maywood, Ill.  
 Eureka—Eureka Water Heater Co., Chicago, Ill.  
 Jiffy—Jiffy Water Heater Co., St. Louis, Mo.  
 Troop—Troop Mfg. Co., Pittsburgh, Pa.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.

**HEATERS, WATER, GAS, AUTOMATIC AND INSTANTANEOUS.**

Acme—The Instantaneous Water Heating Co., Kalamazoo, Mich.  
 American District Steam Co., North Tonawanda, N. Y.  
 American Heater Corp., St. Louis, Mo.  
 Argand—Albany Foundry Co., Albany, N. Y.  
 Bellman, Seaman's, Improved Automatic—W. E. Bellman, Buffalo, N. Y.  
 Berryman—Ernst & Co., Newark, N. J.  
 Bungalow—Pittsburgh Water Heater Co., Pittsburgh, Pa.  
 Clow, James B., & Sons, Chicago, Ill.  
 Day and Night, Triangle—Day and Night Solar Heater Co., Monrovia, Cal.  
 Dayton—Ohio—McCormick Mfg. Co., Dayton, O.  
 Diehl—Chas. R. Diehl, Jackson, Mich.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Esda—Esda Mfg. Co., New York, N. Y.  
 Eureka Water Heater Co., Chicago, Ill.  
 Ever Hot—The Ever Hot Heater Co., Detroit, Mich.  
 Fire King—A. Weiskittel & Sons Co., Baltimore, Md.  
 Fleur De Lis—Boston Steam Specialty Co., Boston, Mass.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Go-Ro—Go-Ro Mfg. Co., New Orleans, La.  
 Harrington—Louis Lipp Co., Cincinnati, O.  
 Hoffmann Heater Co., The, Lorain, O.  
 Humphrey—Humphrey Co., Kalamazoo, Mich.  
 Kompak Co., The, New Brunswick, N. J.  
 Jumbo—Jumbo Heater & Mfg. Co., The, Cleveland, Ohio.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Lattner—P. M. Lattner Mfg. Co., Cedar Rapids, Ia.  
 Lit-Hot—Augmore Mfg. Co., Cleveland, O.  
 Manufacturing Equipment & Eng. Co., Framingham, Mass.

Matthews Steamix—W. H. Matthews & Bro., Inc., St. Louis, Mo.

Modern—The Long-Landreth-Schneider Co., New Brunswick, N. J.  
 Ohio and Ohio M.—Dayton Mfg. Co., Dayton, O.  
 Parrott Heater Co., Detroit, Mich.  
 Peerless Heater Co., Chicago, Ill.  
 Pittsburgh Bungalow—Pittsburgh, Bungalow, Pittsburgh Water Heater Co., Pittsburgh, Pa.  
 Radke—Safety Water Heater Co., Chicago, Ill.  
 Rex—Cleveland Heater Co., Cleveland, O.  
 Ruud—Ruud Mfg. Co., Pittsburgh, Pa.  
 Sands—The Sands Mfg. Co., Cleveland, O.  
 Sharp's Cleanout—General Mfg. Co., Wheeling, W. Va.  
 S-S—Milwaukee Mfg. Co., Milwaukee, Wis.  
 Smith—Fleck Bros. Co., Philadelphia, Pa.  
 Stack Heater Co., Boston, Mass.  
 Taco—Thermal Appliance Co., Inc., New York, N. Y.  
 Thermax—National Stove Co., Lorain, O.  
 Toombs Mfg. Co., Geneva, Ill.  
 Troop—Troop Mfg. Co., Pittsburgh, Pa.  
 Universal—Rotary Mfg. Co., Los Angeles, Cal.  
 Van Zandt—Van Zandt Gas Appliance Co., St. Louis, Mo.  
 Whitlock, American—Whitlock Coll Pipe Co., Hartford, Conn.

**HEATERS, WATER, GAS ENGINE EXHAUST.**

Sims—The Sims Co., Erie, Pa.

**HEATERS, WATER, GAS, RANGE BOILER.**

A-B—A. B. Stove Co., Battle Creek, Mich.  
 Acme Specialty Mfg. Co., Toledo, O.  
 Advance, Hollands—Zurn Mfg. Co., Erie, Pa.  
 A. K.—A. K. Water Heater Mfg. Co., Brooklyn, N. Y.  
 Amaco—Augmore Mfg. Co., Cleveland, O.  
 Anderson Engineering & Supply Co., Peekskill, N. Y. (for horizontal boilers).  
 Argand—Albany Foundry Co., Albany, N. Y.  
 Augmore—Sands Mfg. Co., Cleveland, O.  
 Bryant—Bryant Heater & Mfg. Co., Cleveland, O.  
 Bystrom—The Bystrom Gas Lamp Co., Defiance, O.  
 Chadburn Economy Burner Co., Newburgh, N. Y.  
 Chief—Cleveland Heater Co., Cleveland, O.  
 Clark—Geo. M. Clark & Co., Div., Chicago, Ill.  
 Crane Co., Wm. M., New York.  
 Duluth—Duluth Water Heater Co., Duluth, Minn.  
 Economy—The Economy Gas Stove Co., Rockford, Ill.  
 Economy—Economy Heater Co., Chicago, Ill.  
 Economy—Economy Stove Co., Cleveland, O.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Elliott Water Heater Co., Inc., Brooklyn, N. Y.  
 Estate—The Estate Stove Co., Hamilton, O.  
 Eureka—Eureka Water Heater Co., Chicago, Ill.  
 Excelsior—Isaac A. Sheppard Co., Philadelphia, Pa.  
 Fire King—A. Weiskittel & Sons, Baltimore, Md.  
 Fortune—Thomas, Roberts, Stevenson Co., Philadelphia, Pa.  
 Garland—The Michigan Stove Co., Detroit, Mich.  
 Gordon—A. D. Gordon, Buffalo, N. Y.  
 Gulick—The Debold Co., Inc., Big Run, Pa.  
 Heller—J. P. B. Sadtler Co., Inc., New York.  
 Hoffman Heater Co., The, Lorain, O.  
 Holden—Crane Co., Chicago.  
 Hotstream—Hotstream Heater Co., Cleveland, O.  
 Humphrey—Humphrey Co., Kalamazoo, Mich.  
 Ideal Geyser—Colwell-Ideal Corp., Detroit, Mich.  
 Jewel—Geo. M. Clark & Son, Chicago, Ill.  
 Jewel—Detroit Stove Works, Detroit, Mich.  
 Jiffy—Jiffy Water Heater Co., St. Louis, Mo.  
 Jumbo, King—Jumbo Heater & Mfg. Co., The, Cleveland, O.  
 Keystone—Reineke, Wilson Co., Pittsburgh, Pa.  
 Kwykest—Taylor Burner & Electroplating Co., Pittsburgh, Pa.  
 Kompak—The Kompak Co., New Brunswick, N. J.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Lawson—Lawson Mfg. Co., Pittsburgh, Pa.  
 Liberty—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
 Lion—Pittsburgh Water Heater Co., Pittsburgh, Pa.  
 Little Hercules—Continental Radiator & Foundry Co., St. Louis, Mo.  
 Marvel—The Mustee Water Heater Co., Cleveland, O.  
 Maywood Water Heater Co., Maywood, Ill.  
 Odin—Odin Stove Mfg. Co., Erie, Pa.  
 Ohio—The Ohio Heater Co., Columbus, O.  
 Oriole—Baltimore Gas Appliance & Mfg. Co., Baltimore, Md.  
 O'Reilly—The O'Reilly Mfg. Co., Buffalo, N. Y.  
 Perfection—Milwaukee Gas Stove Co., Milwaukee, Wis.  
 Phaeton Heater Co., Peekskill, N. Y.  
 Planet—James B. Clow & Sons, Chicago, Ill.  
 Radium—James B. Clow & Sons, Chicago, Ill.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.  
 Rex—Cleveland Heater Co., Cleveland, O.  
 Romarco Junior—Martin, Fort Wayne, Ind.  
 Royal—Marvel, Duplex, Keystone—Bastian-Morley Co., La Porte, Ind.

Sands—The Sands Mfg. Co., Cleveland, O.  
 Sharp's—General Mfg. Co., Wheeling, W. Va.  
 Stack—Stack Heater Co., Boston, Mass.  
 Star—James B. Clow & Sons, Chicago, Ill.  
 Straight Line—E. C. Merrill, Pittsburg, Pa.  
 Superior—The Bastian-Morley Co., La Porte, Ind.  
 Torrid—James B. Clow & Sons, Chicago, Ill.  
 Troop Mfg. Co., Pittsburgh, Pa.  
 Twin Water Heater Co., Robinson, Ill.  
 Vulcan Tool & Machine Works, Inc., Newburgh, N. Y.  
 Vulcan—Wm. M. Crane Co., New York, N. Y.  
 Wayne Wizard—Martin, Fort Wayne, Ind.  
 Wilks—S. Wilks Co., Chicago, Ill.

**HEATERS, WATER, GASOLINE.**

Bystrom—The Bystrom Gas Lamp Co., Defiance, O.  
 Clark, Jewel—Geo. M. Clark & Co., Chicago, Ill.  
 Detroit Heater Corp., Detroit, Mich.  
 Duluth—Duluth Water Heater Co., Duluth, Minn.  
 Lawson—Lawson Mfg. Co., Pittsburgh, Pa.  
 Maywood Water Heater Co., Maywood, Ill.  
 Peerless Boiler Co., Chicago, Ill.  
 Reliable—Schneider & Trenkamp Co., Cleveland, O.  
 Royal, Superior—Bastian-Morley Co., La Porte, Ind.  
 Sands—Augmore Mfg. Co., Cleveland, O.

**HEATERS, WATER, INDIRECT.**

Hotstream Heater Co., The, Cleveland, O.

**HEATERS, WATER, KEROSENE.**

Bastian-Morley Co., La Porte, Ind.  
 Clark, Geo. M. & Co., Div., Chicago, Ill.  
 Cleveland Metal Products Co., Cleveland, O.  
 Detroit Heater Corp., Detroit, Mich.  
 Florence—Central Oil & Gas Stove Co., Gardner, Mass.  
 Holyoke—Holyoke Heater Co., Holyoke, Mass.  
 Hotstream Heater Co., The, Cleveland, O.  
 Maywood Water Heater Co., Maywood, Ill.  
 Myers—W. R. Myers Mfg. Co., Chicago, Ill.  
 New Perfection—Cleveland Foundry Co., Cleveland, O.  
 Sands—The Sands Mfg. Co., Cleveland, O.  
 Simmons—John Simmons Co., New York.

**HEATERS, WATER, MARINE.**

McCambridge Co., Philadelphia, Pa.

**HEATERS, WATER, NATURAL GAS  
(FOR RADIATION).**

Hammond-Homberger Co., Silver Creek, N. Y.  
 Pittsburg—Pittsburg Water Heater Co., Pittsburg, Pa.

**HEATERS, WATER, PORTABLE, FOR COM-  
TRACTORS.**

Londellus, C. A., & Sons Co., Inc., Chicago, Ill.

**HEATERS, WATER SERVICE OR DOMESTIC  
WATER SUPPLY.**

Aetna—Illinois Malleable Iron Co., Chicago, Ill.  
 Alberger Heater Co., Buffalo, N. Y.  
 Alberger Pump & Condenser Co., New York, N. Y.  
 American District Steam Co., North Tonawanda, N. Y.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Bellman, Seamans, Improved Automatic—W. E. Bellman, Buffalo, N. Y.  
 Berryman—Ernst & Co., Newark, N. J.  
 Bros—Wm. Bros Boiler & Mfg. Co., Minneapolis, Minn.  
 Burnham Boiler Corporation, Irvington, N. Y.  
 Central Oil & Gas Stove Co., Garden, Mass.  
 Clean E-Z—The Sims Co., Erie, Pa.  
 Clow's Triumph—James B. Clow & Sons, Chicago, Ill.  
 Davidson Heating & Construction Co., Hanover, Pa.  
 Davis, I. B., & Son, Hartford, Conn.  
 Domestic—Keystone Boiler & Foundry Co., Landisville, Pa.  
 Duplex Jiffy—Universal Heater Mfg. Co., St. Louis, Mo.  
 Economy, Perfection, Proviso—Maywood Water Heater Co., Maywood, Ill.  
 F. & W. Co.—Fuller & Warren Co., Troy, N. Y.  
 F-W Co.—The Fuller-Warren Co., Milwaukee, Wis.  
 Geyser—Thatcher Furnace Co., New York, N. Y.  
 Golden Crown—The Stuart & Peterson Co., Burlington, N. J.  
 Gothic—Gurney Heater Mfg. Co., Boston, Mass.  
 Gurney—Gurney Heater Mfg. Co., Boston, Mass.  
 Hancock—United Injector Co., New York.  
 Hoffman Heater Co., The, Lorain, O.  
 Holyoke—Holyoke Heater Co., Holyoke, Mass.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Hudson Boiler Mfg. Co., The, New York, N. Y.  
 Humphrey—Humphrey Co., Kalamazoo, Mich.  
 Ideal—American Radiator Co., Chicago, Ill.  
 Illinois—Illinois Malleable Iron Co., Chicago, Ill.  
 International—International Heater Co., Utica, N. Y.  
 Junior—Herbert Boiler Co., The, Chicago, Ill.  
 Lattner—P. M. Lattner Mfg. Co., Cedar Rapids, Ia.  
 Lawson—Lawson Mfg. Co., Pittsburgh, Pa.  
 Lily—J. M. Ettinger, Chicago, Ill.

Little Giant—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
 Lord & Burnham Co., Irvington, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 National—National Radiator Co., Johnstown, Pa.  
 National Pipe Bending Co., New Haven, Conn.  
 Novus—National Radiator Co., Johnstown, Pa.  
 Paragon Dwarf—Isaac A. Sheppard Co., Philadelphia, Pa.

Pierce Giant—Pierce, Butler & Pierce Mfg. Co., New York.

Pheaton Heater Co., Peekskill, N. Y.  
 Pratt & Cady Co., Inc., Hartford, Conn.  
 Prudential Heating Co., Akron, O.  
 Radium—Frank Prox Co., Terre Haute, Ind.  
 Reilly—Griscom-Russell Co., New York, N. Y.  
 Richmond—Richmond Radiator Co., New York, N. Y.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Ross Heater & Mfg. Co., Buffalo, N. Y.  
 Saxon, Undertank—J. D. Johnson Co., Philadelphia, Pa.  
 Sims—The Sims Co., Erie, Pa.  
 Stack Heater Co., Boston, Mass.  
 Standard—Giblin & Co., Utica, N. Y.  
 Stark—Federal Radiator Co., New Castle, Pa.  
 Sterling—Sill Stove Works, Rochester, N. Y.  
 Stewart—The Geo. B. Stewart Co., Pittsburgh, Pa.  
 Sunray—U. S. Radiator Corp., Detroit, Mich.  
 Tobasco—Kewanee Boiler Co., Kewanee, Ill.  
 Troop—Troop Mfg. Co., Pittsburgh.  
 Union Boiler Co., Pennington, N. J.  
 Utility—Standard Steam Specialty Co., New York, N. Y.

Vesuvius—The Vesuvius Engineering Co., Inc., New York (for water supply and house heating).  
 Volunteer Jr.—Wm. H. Page Boiler Co., New York, N. Y.

Washout—The Crestline Mfg. Co., Crestline, O.  
 Well-McLain—Well-McLain Co., Michigan City, Ind.  
 Whitlock, Jr.—Whitlock Coil Pipe Co., Hartford, Conn.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.

**HEATERS, WATER, STEAM, INSTANTANEOUS.**

Economy Faucet Co., Providence, R. I.  
 Excelsio Specialty Works, Buffalo, N. Y.  
 Hayden & Derby Mfg. Co., New York, N. Y.  
 Kelley, Ben. F., & Son, New York, N. Y.  
 Matthews, W. N. & Brother, Inc., St. Louis, Mo.  
 ♦ Noiseless—American Injector Co., Detroit, Mich.  
 Powers Regulator Co., Chicago, Ill.

**HELMETS, AMMONIA AND SMOKE.**

Eveready—Servus Rescue Equipment Co., The, Newark, N. J.  
 La France—American La France Fire Engine Co., Elmira, N. Y.  
 National, Peerless—Hayward & Co., S. F., New York, N. Y.  
 National Helmet Co., New York, N. Y.  
 Protecto—Protecto Safety Appliance Co., Newark, N. J.  
 Vajen Improved—The Vajen Helmet Co., Richmond, Ind.  
 Woodhouse—Woodhouse Mfg. Co., New York, N. Y.

**HELMETS, ARC WELDING.**

C. E. S. Co.—Chicago Eye Shield Co., Chicago, Ill.  
 Hard Billed—Bullard, E. D., San Francisco, Calif.  
 Merry Optical Co., Kansas City, Mo.  
 Protecto Safety Appliance Co., Newark, N. J.

**HELMETS, MINERS' RESCUE.**

Draeger, Paul—American Atmos Corp., Pittsburgh, Pa.  
 Fleuss-Proto—H. N. Elmer, Chicago, Ill.  
 Wheeler—F. H. Wheeler Mfg. Co., Chicago, Ill.

**HELMETS, SAND BLAST.**

Betton—J. M. Retton, New York, N. Y.  
 C. E. S. Co.—Chicago Eye Shield Co., Chicago, Ill.  
 Multi-Metal Separating Screen Co., New York, N. Y.  
 National—S. F. Hayworth Co., New York, N. Y.

**HINGE POST PACKING FOR  
CLOSET SEATS.**

Bloom Flusher Co., Tiffin, O.

**HINGES, CLOSET SEAT.**

American Brass & Copper Co., The, New York, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Bon Ton—Sherwood Brass Works, Detroit, Mich.  
 Box—Federal-Huber Co., Chicago, Ill.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Casco—Federal-Huber Co., Chicago, Ill.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Chicago—Union Brass & Metal Mfg. Co., St. Paul.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Dunstane Brothers Mfg. Co., Concord, N. H.  
 Eclipse—The Columbus Brass Co., Columbus, O.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Eljer Co., Cameron, W. Va.

**Emery Self Raising**—Wm. S. Emery, New York, N. Y.  
**Eterno**—Sherwood Brass Works, Detroit, Mich.  
**Exeter Brass Works**, Exeter, N. H.  
**Federal-Huber Co.**, Chicago, Ill. (Trade names—  
 Adrian, Continental, Government).  
**Frost Mfg. Co.**, Kenosha, Wis.  
**Grand Haven Brass Foundry Co.**, Grand Haven, Mich.  
**Haydenville Co.**, The, Haydenville, Mass.  
**James Mfg. Co.**, Canton, Ohio.  
**Knott Mfg. Co.**, Tell City, Ind.  
**Miller, Chas. A. Co.**, Sturgis, Mich.  
**Manhattan—Sherwood Brass Works**, Detroit, Mich.  
**M. V. E.—Morency-Van Buren Co.**, Sturgis, Mich.  
**Nelson, N. O. Mfg. Co.**, St. Louis, Mo.  
**New York—Union Brass & Metal Mfg. Co.**, St. Paul.  
**Nilo—Federal-Huber Co.**, Chicago, Ill.  
**N. Y.—Federal-Huber Co.**, Chicago, Ill.  
**Park & McKay Co.**, The, Detroit, Mich.  
**Plume & Atwood Mfg. Co.**, The, Waterbury, Conn.  
**Rex—Jenkins Mfg. Co.**, New York, N. Y.  
**Root, C. J. Co.**, Bristol, Conn.  
**Sanitex—Chicago Spring Butt Co.**, Chicago, Ill.  
**Sargent & Co.**, New Haven, Conn.  
**Shwab Bros. Co.**, New York, N. Y.  
**Simple—J. L. Mott Iron Works**, New York, N. Y.  
**Union—Union Brass & Metal Mfg. Co.**, St. Paul, Minn.  
**Union Metal Works**, Chelsea, Mass.  
**Waterbury Brass Goods Corporation**, The, Waterbury, Conn.  
**Waterbury Mfg. Co.**, Waterbury, Conn.  
**Wolverine Brass Works**, Grand Rapids, Mich.  
**Woodward-Wanger Co.**, Philadelphia, Pa.

#### HINGES, CLOSET STALL.

**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**Bonner Bros.**, Brooklyn, N. Y.  
**Brasco—The Columbus Brass Co.**, Columbus, O.  
**Columbus Brass Co.**, Columbus, O.  
**Edwardsville Brass Works**, Edwardsville, Ill.  
**Federal-Huber Co.**, Chicago, Ill.  
**Stanley Works**, The, New Britain, Conn.

#### HINGES, STEEL.

(See "Butts and Hinges, Steel.")

#### HITCHINGS, MINE CAR.

**American Chain Co.**, Bridgeport, Conn.  
**Littleford Bros.**, Cincinnati, O.  
**Pittsburgh Knife & Forge Co.**, Pittsburgh, Pa.  
**Sanford—Day Iron Works**, Knoxville, Tenn.

#### HOBS, SPUR, SPIRAL AND WORM.

**American Tool & Machine Co.**, Boston, Mass.  
**Barber-Colman Co.**, Rockford, Ill.  
**Becker Milling Machine Co.**, Hyde Park, Mass.  
 ♦ **Brown & Sharpe Mfg. Co.**, Providence, R. I.  
 ♦ **Earle Gear & Machine Co.**, Philadelphia, Pa.  
**Goddard Tool Co.**, Chicago, Ill.  
**Gould & Eberhardt**, Newark, N. J.  
**Illinois Tool Works**, Chicago, Ill.  
**Krasberg Mfg. Co.**, Chicago, Ill.  
**Lees-Bradner Co.**, Cleveland, O.  
**Michigan Tool Co.**, Detroit, Mich.  
**Meisselbach-Catucci Mfg. Co.**, Newark, N. J.  
**Niles-Bement-Pond Co.**, New York, N. Y.  
 ♦ **Oliver Iron & Steel Co.**, Pittsburgh, Pa.  
 ♦ **Pratt & Whitney Co.**, Hartford, Conn.  
 ♦ **Union Twist Drill Co.**, Athol, Mass.

#### HODS, STEEL, FOR SHOP USE.

**Steel Basket & Specialty Co.**, Cedar Rapids, Iowa.

#### HOES, RAKES, FORKS AND MATTOCKS.

**Bradley's Sons**, G. W., Westport, Conn.  
**Cronk & Carrier Mfg. Co.**, The, Elmira, N. Y.  
**Diamond, Fairmount, Otsego, True Temper—American**  
**Axe & Tool Co.**, Glassport, Pa.  
**Iron City Star—Iron City Tool Works**, Pittsburgh, Pa.  
**Kelly Axe Mfg. Co.**, Charleston, W. Va.  
**Klein-Logan Co.**, Pittsburgh, Pa.  
**Mann, James H. Co.**, Lewistown, Pa.  
 ♦ **Oliver Iron & Steel Co.**, Pittsburgh, Pa.  
**Sandusky Tool Co.**, Sandusky, O.  
**Union Furnace Mfg. Co.**, Union Furnace, Pa.

#### HOGS, OR WASTE WOOD GRINDERS.

**Diamond—Diamond Iron Works**, Minneapolis, Minn.  
**M. M.—Mitts & Merrill**, Saginaw, Mich.  
**Valk & Murdock Co.**, Charleston, S. C.  
**Wheland—The Wheland Co.**, Chattanooga, Tenn.  
**William Patent Crusher & Pulverizer Co.**, St. Louis, Mo.

#### HOISTS, ASH, SIDEWALK.

**Amco—Alvey Mfg. Co.**, St. Louis, Mo.  
**Burke Furnace Co.**, Chicago, Ill.  
**The Ernst—Chas. K. Ernst**, Buffalo, N. Y.  
**Link-Belt Company**, Chicago and Philadelphia.

**Maine Electric Co.**, The, Portland, Me.  
**Washburn & Granger**, New York.  
**Whaler-McDowell Elevator Co.**, New York, N. Y.

#### HOISTS, BELT POWER.

**American—American Hoist & Derrick Co.**, St. Paul, Minn.  
**Atlas Engineering Co.**, Milwaukee, Wis.  
**Carlin, John H.**, Machine Co., Pittsburgh, Pa.  
**Clyde-Grade—Clyde Iron Works**, Duluth, Minn.  
**Dobbie Foundry & Machine Co.**, Niagara Falls, N. Y.  
**Erie—Erie Clutch & Pulley Co.**, Erie, Pa.  
**Farrell—John Farrell & Son**, Newark, N. J.  
**Harris Hoisting and Carrying Machines—C. S. Harris**  
**Co.**, Rome, N. Y.  
**Jordan—Jordan Bros., Inc.**, New York, N. Y.  
**Link-Belt Company**, Chicago and Philadelphia.  
**Patten Manufacturing Co.**, Chattanooga, Tenn.  
**Reliable—National Hoisting Engine Co.**, Harrison, N. J.  
**Star Machinery Co.**, Seattle, Wash.  
**Street Brothers Machine Works**, Chattanooga, Tenn.

#### HOISTS, CARGO AND DOCK

**Beaumont, R. H. Co.**, Philadelphia, Pa.  
**Dake—Dake Engine Co.**, Grand Haven, Mich.  
**Lidgerwood Mfg. Co.**, New York.  
**Melco—Maine Electric Co.**, The, Portland, Me.  
**Superior Iron Works Co.**, Superior, Wis.  
**Street Brothers Machine Works**, Chattanooga, Tenn.  
**Vulcan—Vulcan Mfg. Co.**, Seattle, Wash.  
**Wellman-Seaver-Morgan Co.**, Cleveland, O.

#### HOISTS, CHAIN.

(See also "Blocks, Chain.")

**Acme—The Franklin Moore Co.**, Winsted, Conn.  
**Ammunition—Chisholm & Moore Mfg. Co.**, Cleveland, Ohio.  
**Bestofall—Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Box—Alfred Box & Co., Inc.**, Philadelphia, Pa.  
**Champion—Northern Engineering Works**, Detroit, Mich.  
**Cleveland Chain Mfg. Co.**, Cleveland, Ohio.  
**Contractors' Plant Mfg. Co.**, Buffalo, N. Y.  
 ♦ **Cyclone—The Chisholm-Moore Mfg. Co.**, Cleveland, O.  
 ♦ **Differential—The Franklin Moore Co.**, Winsted, Conn.  
**Fischer & Hayes Rope & Steel Co.**, Chicago, Ill.  
**Ford Chain Block & Mfg. Co.**, Philadelphia, Pa.  
**High Speed—Fairbanks, Morse & Co.**, Chicago, Ill.  
**Hobbs, Clinton E.**, Boston, Mass. (Trade names—  
 Differential, Duplex, Weston.)  
**Irving—Irving Mfg. & Tool Co.**, New York, N. Y.  
**King—A. R. King Mfg. Co.**, Kingston, N. Y.  
**The Loudon Machinery Co.**, Fairfield, Iowa.  
 ♦ **Moore Anti Friction—The Chisholm & Moore Mfg. Co.**  
 Cleveland, O.  
**New Jersey Foundry & Machine Co.**, New York, N. Y.  
**Niles-Bement-Pond Co.**, New York, N. Y.  
 ♦ **Peerless—Harrington, Son & Co.**, Edwin, Philadelphia, Pa.  
**Peerless—Treece, W. C. & Co.**, Findlay, Ohio (beef).  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Pull-U-Out—Pull-U-Out Sales Co.**, St. Louis, Mo.  
**Reading—Reading Chain & Block Corp.**, Reading, Pa. (multiple gear)  
**Round Differential—D. Round & Son**, Cleveland, O.  
**Screw—D. Round & Son**, Cleveland, O.  
**Scully Steel & Iron Co.**, Chicago, Ill.  
**Simplex—J. G. Speldel**, Reading, Pa.  
 ♦ **Standard Screw—The Chisholm & Moore Mfg. Co.**  
 Cleveland, O.  
**Standard—Wright Mfg. Co.**, Lisbon, O.  
**Superior—David Round & Son**, Cleveland, O.  
 ♦ **Tribloc—Ford Chain Block & Mfg. Co.**, Philadelphia, Pa.  
**Weston—D. Round & Son**, Cleveland, O.  
 ♦ **Wright—Wright Mfg. Co.**, Lisbon, O. (High Speed  
 Screw and Differential.)  
 ♦ **Yale Duplex, Yale Triplex, Yale Differential—The Yale**  
**& Towne Mfg. Co.**, Stamford, Conn.

#### HOISTS, COAL HANDLING.

(See also "Machinery, Coal Handling.")

**Carlin, John H.**, Machine Co., Pittsburgh, Pa.  
 ♦ **Fairbanks, Morse & Co.**, Chicago, Ill.  
 ♦ **Jeffrey—Jeffrey Mfg. Co.**, Columbus, O.  
**Lidgerwood Mfg. Co.**, New York, N. Y.  
**Link-Belt Company**, Chicago and Philadelphia.

#### HOISTS, CONTRACTORS.

**Boss—American Cement Machine Co., Inc.**, Keokuk, Ia.  
**Brown, Morgan—Brown Clutch Co.**, Sandusky, O.  
**Buffalo Contractors Plant Corp.**, Buffalo, N. Y.  
**C. H. & E.—C. H. & E. Manufacturing Co., Inc.**, Milwaukee, Wis.  
**Clark Mfg. Co.**, C. H., Cleveland, O.  
**Clover Leaf—Clover Leaf Machine Co.**, South Bend, Ind.  
**Clyde Iron Works**, Duluth, Minn.  
**Cushman—Cushman Motor Works**, Lincoln, Neb.  
**Dake—Dake Engine Co.**, Grand Haven, Mich.  
**Double Drum—Universal Hoist & Mfg. Co.**, Cedar Falls, Ia.

♦ Fairbanks, Morse & Co., Chicago, Ill.  
Havana Mfg. Co., Havana, Ill.  
Ideal Non-Reversible—Universal Hoist & Mfg. Co., Cedar Falls, Iowa.  
Ideal—Universal Hoist & Mfg. Co., Cedar Falls, Ia.  
Ireland Machine & Foundry Co., Norwich, N. Y.  
Johnson—Seattle Machine Works, Seattle, Wash.  
Lansing Co., Lansing, Mich.  
Lidgerwood Mfg. Co., New York, N. Y.  
National Hoisting Engine Co., Harrison, N. J.  
Parker, S. E., Chicago, Ill.  
Patten Mfg. Co., Chattanooga, Tenn.  
Pneumelectric Corp., Syracuse, N. Y.  
Reliable Erie—Erie Clutch & Pulley Co., Erie, Pa.  
Reversible Ideal—Universal Hoist & Mfg. Co., Cedar Falls, Ia.  
Sasgen Derrick Co., Chicago, Ill.  
Stanley Hoist & Machine Co., New York.  
Sultan—Whitman Agricultural Co., St. Louis, Mo.  
Winterhoff Tool & Machine Co., Elkhart, Ind.  
Wonder—Construction Machinery Co., Waterloo, Ia.

**HOISTS, DIFFERENTIAL.**

Reading—Reading Chain & Block Corp., Reading, Pa.

**HOISTS, DRILL & SPUD.**

Dake Engine Co., Grand Haven, Mich.

**HOISTS, DUMP CAR.**

Washington Machinery & Supply Co., Spokane, Wash.  
Wellington Machine Co., Wellington, Ohio.

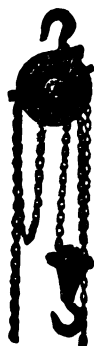
**HOISTS, ELECTRIC.**

(See also "Engines, Hoisting, Steam.")

Alco—Albany Iron Works, Albany, Ore.  
Alliance Machine Co., Alliance, O.  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
American—American Hoist & Derrick Co., St. Paul, Minn.  
Armington—Armington Engineering Co., Wickliffe, Ohio.  
Barber-Foster—Barber-Foster Engineering Co., The, Cleveland, O.  
Box—Alfred Box & Co., Inc., Philadelphia, Pa.  
Brown Hoisting Machinery Co., The, Cleveland, O.  
Browning—Browning-Sommer-Adams Co., Cleveland, O.  
Buffalo Contractors Plant Corp., Buffalo, N. Y.  
Buffalo Hoist & Derrick Co., Buffalo, N. Y.  
Carlin, John H., Machine Co., Pittsburgh, Pa.  
Case—Crane Engineering Co., Columbus, O.  
Clover Leaf—Clover Leaf Machine Co., South Bend, Ind.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Clyde-Grade—Clyde Iron Works, Duluth, Minn.  
Crawford & McCrimmon Co., Brazil, Ind.  
Dake Engine Co., Grand Haven, Mich.  
Detroit Hoist & Machine Co., Detroit, Mich.  
Diamond Machine Co., Monongahela, Pa.  
Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
Euclid—Euclid Crane & Hoist Co., Euclid, O.  
♦ Fairbanks-Morse—Fairbanks, Morse & Co., Chicago, Ill.  
Flory—The S. Flory Mfg. Co., Bangor, Pa.  
Flory—Lenher Engineering Co., New York, N. Y.  
General Electric Co., Schenectady, N. Y.  
Grote—F. Grote Mfg. Co., Evansville, Ind.  
Hardie—Tyne Mfg. Co., Birmingham, Ala.  
Ingersoll-Rand Co., New York, N. Y.  
Johnston & Jennings Co., The, Cleveland, O.  
Lake Shore Engine Works, Marquette, Mich.  
Lambert Hoisting Engine Co., Newark, N. J.  
Lidgerwood Mfg. Co., New York, N. Y.  
Lift About—Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
Link-Belt Company, Chicago and Philadelphia.  
Litchfield Foundry & Machine Co., Litchfield, Ill.  
♦ Little Giant—Chicago Pneumatic Tool Co., New York.  
Maine Electric Co., Portland, Me.  
Maris Bros., Philadelphia, Pa.  
Milwaukee—Milwaukee Electric Crane & Mfg. Co., Milwaukee, Wis.  
Morgan Engineering Co., Alliance, O.  
Mundy Hoisting Engine Co., J. S., Newark, N. J.  
National—National Hoisting Engine Co., Harrison, N. J.  
New Jersey Foundry & Machine Co., New York.  
Nordberg Mfg. Co., Milwaukee, Wis.  
Northern Engineering Works, Detroit, Mich.  
O. K.—O. K. Clutch & Machinery Co., Columbia, Pa.  
Orr & Sembower, Inc., Reading, Pa.  
Ottumwa Iron Works, Ottumwa, Iowa.  
Parker, S. E., Chicago, Ill.  
Pawling & Harnischfeger Co., Milwaukee, Wis.  
Pneumelectric—Pneumelectric Corp., Syracuse, N. Y.  
Reading Crane & Hoist Works, Reading, Pa.  
Reading—Reading Chain & Block Corp., Reading, Pa.  
Reliable, Erie—Erie Clutch & Pulley Co., Erie, Pa.  
Reliable, Reliance—Reliance Machine & Tool Works, St. Louis, Mo.

**Reading Chain and Block Corporation**

Reading, Pa., U. S. A.

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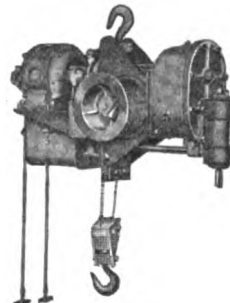
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Roeper—Roeper Crane & Hoist Works, Reading, Pa.  
Shaw—Shaw-Electric Crane Co., New York, N. Y.  
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
South Norwalk Engineering Co., South Norwalk, Conn.  
Sprague Electric Works, New York, N. Y.  
Spur Geared—Franklin Moore Co., Winsted, Conn.  
Stamp Electric Hoist Co., San Francisco, Cal.  
Standard Electric & Elevator Co., Baltimore, Md.  
Standard—Mead-Morrison Mfg. Co., Boston, Mass.  
Star Machinery Co., Seattle, Wash.  
Stine—The J. C. Stine Co., Tyrone, Pa.  
Stine, S. R., Osceola Mill, Pa.  
Street Brothers Machine Works, Chattanooga, Tenn.  
Thomas Elevator Co., Chicago, Ill.  
Toledo Bridge & Crane Co., Toledo, O.  
Washington Iron Works, Seattle, Wash.  
Western Electric Co., Inc., Chicago, Ill.  
Wheeler-McDowell Elevator Co., New York, N. Y.  
Whiting Fdy. Equipment Co., Harvey, Ill.  
Wright Mfg. Co., Lisbon, O.  
♦ Yale Triplex—Yale & Towne Mfg. Co., Stamford, Conn.

**HOISTS, FRICTION.**

J. E. Porter Corporation, Ottawa, Ill.

**HOISTS, FURNACE DOOR.**

♦ Lewis—Link-Belt Co., Chicago, Ill.

**HOISTS, GAS ENGINE DRIVEN.**

Antigo—Meyer Bros. Co., Antigo, Wis.  
Boss—American Cement Machine Co., Keokuk, Iowa.  
Brown and Little Giant—The Brown Clutch Co., Sandusky, O.  
Carlin Machinery & Supply Co., Inc., Pittsburg, Pa.  
Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
Central City Iron Works, Stevens Point, Wis.  
Clyde Iron Works, Duluth, Minn.  
Commercial Engine Co., Los Angeles, Cal.  
♦ Fairbanks, Morse & Co., Chicago, Ill.  
Fairbanks—The Fairbanks Co., New York, N. Y.  
Lidgerwood Mfg. Co., New York, N. Y.  
Mundy Hoisting Engine Co., J. S., Newark, N. J.  
Novo—Novo Engine Co., Lansing, Mich.  
O. K.—O. K. Clutch & Machinery Co., Columbia, Pa.  
Orr & Sembower, Inc., Reading, Pa.  
Parker, S. E., Chicago, Ill.  
Patten—Patten Manufacturing Co., Chattanooga, Tenn.

Schramm, Chris D., & Son, Inc., Philadelphia, Pa.  
 Standard—Mead-Morrison Mfg. Co., Boston, Mass.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Western—Western Machinery Co., Los Angeles, Calif.  
 Witte Iron Works Co., Kansas City, Mo.

### HOISTS, HAND POWER.

Armington—Armington Engineering Co., Wickliffe, Ohio.  
 Box, Alfred, & Co., Philadelphia, Pa.  
 Buffalo Contractors Plant Corp., Buffalo, N. Y.  
 Byers, John F., Machine Co., Ravenna, O.  
 Case—Crane Engineering Co., Columbus, O.  
 C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.  
 C-K Co.—Cruse-Kemper Co., Ambler, Pa.  
 Dobbie Fdy. & Machine Co., Niagara Falls, N. Y.  
 ♦ Ford Chain Block & Mfg. Co., Philadelphia, Pa.  
 Harrington, Edwin, Son & Co., Philadelphia, Pa.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Kilbourne & Jacob Mfg. Co., Columbus, O.  
 Loudon Machinery Co., The, Fairfield, Iowa.  
 Maris Bros., Philadelphia, Pa.  
 Mason, Volney W., & Co., Providence, R. I.  
 Miller—Portable Tool Supply Co., Buffalo, N. Y.  
 Parker, S. E., Chicago, Ill.  
 Reading—Reading Chain & Block Corp., Reading, Pa.  
 Reliable Erie—Erie Clutch & Pulley Co., Erie, Pa.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Speidel, J. G., Reading, Pa.  
 ♦ Wright Mfg. Co., Lisbon, O.  
 ♦ Yale & Towne Mfg. Co., Stamford, Conn.

### HOISTS, HEAD GATE.

Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Murray Mfg. Co., D. J., Wausaw, Wis.  
 Trump—Trump Mfg. Co., Springfield, O.

### HOISTS, HYDRAULIC.

Chambersburg Engineering Co., Chambersburg, Pa.  
 Hydro—The Heil Co., Milwaukee, Wis.  
 Moran Engineering Co., Alliance, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Whiting Foundry Equipment Co., Harvey, Ill.

### HOISTS, MINING.

(See also "Machinery, Mining.")

Abro-Clem—Abro-Clem Elevator Co., Philadelphia, Pa.  
 Beaumont, R. H. Co., Philadelphia, Pa.  
 Connellsville Mfg. & Mine Sup. Co., Connellsville, Pa.  
 Doak Gas Engine Co., Oakland, Cal.  
 Fairmont Mining Machinery Co., Fairmont, W. Va.  
 Flory—S. Flory Mfg. Co., Bangor, Pa.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Maine Electric Co., Portland, Me.  
 Novo—Novo Engine Co., Lansing, Mich.  
 Pneumatic Corp., Syracuse, N. Y.  
 Seattle Machine Works, Seattle, Wash.  
 Wanghoist—Denver Rock Drill Mfg. Co., Denver, Colo.

### HOISTS, MONORAIL TROLLEY.

Barber-Foster—Barber-Foster Engineering Co., Cleveland, O.  
 ♦ C. M.—Chisholm-Moore Mfg. Co., Cleveland, O.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Dake—Dake Engine Co., Grand Haven, Mich.  
 Euclid—Euclid Crane & Hoist Co., Euclid, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Shaw—Manning, Maxwell & Moore, Inc., New York.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 Toledo—Toledo Crane Co., Bucyrus, O.

### HOISTS, MOTOR TRUCK DUMPING.

Columbian Steel Tank Co., Kansas City, Mo.

### HOISTS, PNEUMATIC.

Brown Hoisting Machinery Co., Cleveland, O.  
 Curtis & Co. Mfg. Co., St. Louis, Mo.  
 Curtis Pneumatic Machinery Co., St. Louis, Mo.  
 Dake Engine Co., Grand Haven, Mich.  
 Detroit Hoist & Machine Co., Detroit, Mich.  
 Hanna Engineering Works, Chicago, Ill.  
 Imperial—Ingersoll-Rand Co., New York, N. Y.  
 Little David—Worthington Pump & Machinery Corp., New York, N. Y.  
 Little Giant—Chicago Pneumatic Tool Co., New York.  
 Little Tugger—Ingersoll-Rand Co., New York.  
 Nordberg Mfg. Co., Milwaukee, Wis.  
 Northern Engineering Works, Detroit, Mich.  
 Obermayer, S., Co., The, Cincinnati, Ohio.  
 Q. M. S.—Hanna Engineering Works, Chicago, Ill.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.  
 South Park Machine & Supply Co., Port Huron, Mich.

Stow Flexible Shaft Co., Philadelphia, Pa.  
 ♦ Turbinair—Sullivan Machinery Co., Chicago, Ill.  
 Wanghoist—Denver Rock Drill Mfg. Co., Denver, Colo.  
 Whiting Foundry Equipment Co., Harvey, Ill.

### HOISTS, PORTABLE.

(See "Cranes, Portable.")

### HOISTS, STEAM.

(See "Engines, Hoisting.")

Buffalo Hoist & Derrick Co., Buffalo, N. Y.  
 Stine, S. R., Osceola Mill, Pa.  
 Thomas Elevator Co., Chicago, Ill.  
 Vulcan Iron Works, Wilkesbarre, Pa.  
 Wanghoist—Denver Rock Drill Mfg. Co., Denver, Colo.

### HOISTS, TELESCOPIC.

Ernst—Chas. K. Ernst, Buffalo, N. Y.  
 G. & G.—Gillis & Geoghegan, New York, N. Y.

### HOISTS, WHIP.

Mason, Volney W. & Co., Inc., Providence, R. I.

### HOISTS, WIRE.

Leyner, J. Geo., Engineering Works Co., Littleton, Colo. (mine).

### HOLDERS, CANDLE.

Bernz, Otto Co., Newark, N. J.  
 Johnson, Wm., Newark, N. J.

### HOLDERS-ON, PNEUMATIC.

Canton Pneumatic Tool Co., The, Canton, O.  
 Chicago Pneumatic Tool Co., New York.  
 Gunnell—Manitowoc Ship Building Co., Manitowoc, Wis.  
 Ingersoll-Rand Co., New York, N. Y.  
 Keller-Master—Keller Pneumatic Tool Co., Grand Haven, Mich.  
 Oldham—Geo. Oldham & Son Co., Philadelphia.

### HOLDERS, DIAMOND.

Strong's—Montgomery & Co., Inc., New York.

### HOLDERS, DIE AND TAP.

Adamantine—American Tap & Die Co., Greenfield, Mass.  
 ♦ Bay State—Bay State Tap & Die Co., Mansfield, Mass.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Bullock Mfg. Associates, Springfield, Mass.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 Geier, P. A., Co., Cleveland, O.  
 ♦ Geometric—Geometric Tool Co., The, New Haven, Conn.  
 ♦ Lighting—Wiley & Russell Mfg. Co., Greenfield, Mass.  
 ♦ Little Giant—Wells Bros. Co., Greenfield, Mass.  
 Paragon Tool Co., Seattle, Wash.  
 Pratt & Whitney Co., The, Hartford, Conn.  
 Proconier Line—Wm. L. Proconier, Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.  
 Wizard—McCrosky Tool Corp., Meadville, Pa.

### HOLDERS, DRILL.

♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
 Billings & Spencer Co., The, Hartford, Conn.  
 Bullock Mfg. Co., Springfield, Mass. (extension).  
 ♦ Champion—Western Tool & Mfg. Co., Springfield, O.  
 ♦ Cleveland Twist Drill Co., The, Cleveland, O.  
 Diamond "N"—Diamond Expansion Bolt Co., New York, N. Y.  
 ♦ Lighting, Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Lutz—Lutz Co., Inc., Philadelphia, Pa.  
 Porter Cable Machine Co., Syracuse, N. Y.  
 Satco—Steel-Art Tool Co., The, Chicago, Ill.  
 Sebec—Star Expansion Bolt Co., New York, N. Y.  
 Sterling Multiple Spindle—W. E. Scallan & Co., Cincinnati, Ohio.  
 Union Tool Co., Orange, Mass.

### HOLDERS, EXTENSION BIT.

Millers Falls Co., New York, N. Y.

### HOLDERS, FLOATING, FOR TAPS, REAMERS AND COUNTERBORES.

♦ The McCrosky Tool Corp., Meadville, Pa.

### HOLDERS, FLUSH PIPE.

Acheson Mfg. Co., Braddock, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.  
 B. B. Specialty Co., Pittsburg, Pa.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Columbus Brass Co., Columbus, O.  
 Crawford—F. W. Webb Mfg. Co., Boston, Mass.



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Federal-Huber Co., Chicago, Ill.  
Fee & Mason Mfg. Co., New York, N. Y.  
Modern Iron Works, Quincy, Ill.  
Moniter—Chandler Pump Co., Cedar Rapids, Ia.  
Peck Bros. & Co., The, New Haven, Conn.  
Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
Van Mfg. Co., Boston, Mass.  
Webco—F. W. Webb Mfg. Co., Boston, Mass.  
Wise, J. B., Inc., Watertown, N. Y.

## HOLDERS, GAGE GLASS.

Danubil Co., New York, N. Y.

## HOLDERS, GAS.

Bartlett & Hayward Co., The, Baltimore, Md.  
Camden Iron Works, Camden, N. J.  
Davis & Farnum Mfg. Co., Waltham, Mass.  
Ritter-Conly Co., Pittsburgh, Pa.  
Stamanco—The Stacy Mfg. Co., Cincinnati, O.  
Western Gas Construction Co., The, Fort Wayne, Ind.  
Western Pipe & Steel Co., Los Angeles, Cal.  
Wood & Co., R. D., Philadelphia, Pa.

## HOLDERS FOR GRINDING CUTTERS.

♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.

## HOLDERS, KNURL.

Braunsdorf-Mueller Co., Elizabeth, N. J.  
Graham—Graham Mfg. Co., Providence, R. I.  
Pratt & Whitney Co., The, Hartford, Conn.

## HOLDERS, LEAD PIPE AND NIPPLE.

Little Jack—Wolverine Brass Works, Grand Rapids, Mich.  
Vanderman's—Vanderman Mfg. Co., Willimantic, Conn.

## HOLDERS, NIPPLE.

(See "Chucks, Nipple.")

## HOLDERS, NOZZLE.

Clay, John H., Philadelphia, Pa.

## HOLDERS, PIPE, NICKEL PLATED.

H. B. Specialty Co., Pittsburgh, Pa.

## HOLDERS, SOAP, TUMBLER, ETC., FOR BATHROOMS.

(See "Fittings, Bath and Toilet Room.")

American Ring Co., Waterbury, Conn.  
Bay Ridge Specialty Co., Inc., Trenton, N. J.  
Easy Set—J. H. Balmer Co., Passaic, N. J. (China).  
Russell, John M., Mfg. Co., Saugatuck, Conn.

## HOLDERS, TOOL, FOR LATHES, PLANERS, SHAPERS AND BORING MACHINES.

♦ Agrippa—J. H. Williams & Co., Brooklyn, N. Y.  
American—American Tool & Machine Co., Boston, Mass.  
♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
Bonney Vise & Tool Works, Inc., Allentown, Pa.  
Champion—Western Tool & Mfg. Co., Springfield, O.  
Clark Equipment Co., Buchanan, Mich.  
Cleveland National Machine Co., Cleveland, Ohio.  
♦ Cleveland Twist Drill Co., Cleveland, O.  
Cocobola—Williamsburg Mfg. Co., Williamsburg, Mass.  
Cronau Both Ways—Otto H. Cronau, New York.  
Eberhart—Union Tool Co., Orange, Mass.  
Efficiency—Whitman Metal Goods Co., Worcester, Mass.  
4 in 1—Windau Tool Co., Cleveland, Ohio.  
Geier—Geier, P. A., Co., Cleveland, O.  
Gisholt Machine Co., Madison, Wis.  
Hall, Frederick M., Waterbury, Conn.  
Hill Tools—Union Tool Co., Orange, Mass.  
Jost's Sons, Edmund, Newark, N. J.  
Lang—F. J. McCoy, Erie, Pa.  
LeBond, R. K., Machine Tool Co., Cincinnati, O.  
Le Count Wm. G., Norwalk, Conn.  
M. B. Hill—Ready Tool Co., Bridgeport, Conn.  
Marcy Tool Works, Inc., Putnam, Conn.  
Maslin & Son, John, Jersey City, N. J.  
Morgan Mfg. Co., Inc., Keene, N. H.  
O. K.—O. K. Tool Co., Inc., Shelton, Conn.  
Parker—Parker Machine Co., Boston, Mass.  
Pratt & Whitney Co., Hartford, Conn.

Recommended by leading belt manufacturers because  
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## CRESCENT BELT FASTENERS "For Continuous Production"

Make belts endless on pulley side. Do not weaken belt  
at joint. For use on transmission, elevating and con-  
veying belting of every length, width and thickness. A  
permanent joint on every kind and make of belt.

Crescent Belt Fastener Co., 381 Fourth Ave., New York, U. S. A.

Red E—The Ready Tool Co., Bridgeport, Conn.  
Rigid—Rigid Tool Holder Co., Washington, D. C.  
Rouillard—Montgomery & Co., Inc., New York, N. Y.  
Ryerson, Jos. T., & Son, Chicago, Ill.  
Sebco—Star Expansion Bolt Co., New York, N. Y.  
Stockbridge Machine Co., Worcester, Mass.  
T. C.—Wm. S. Nicholls, Hoosick Falls, N. Y.  
United States—The Fairbanks Machine Tool Co.,  
Springfield, O.  
Universal—Van Doren Mfg. Co., Chicago Heights, Ill.  
Vulcan—J. H. Williams & Co., Brooklyn, N. Y.  
♦ Western Tool & Mfg. Co., Springfield, O.  
West Haven Mfg. Co., New Haven, Conn.  
Whalen—Cincinnati Planer Co., Cincinnati, O.  
Windau Tool Co., Cleveland, Ohio.

## HOODS, BUFFING AND GRINDING WHEEL.

Bicalky Fan Co., Buffalo, N. Y.  
Buffalo Forge Co., Buffalo, N. Y.  
Economy Adjustable—Kirk & Blum Mfg. Co., Cincin-  
nati, O.  
Grammes, L. F. Sons, Allentown, Pa.  
Lehigh—Hersh & Brother, Allentown, Pa.  
Leiman Bros., New York, N. Y.  
Mannen, John E., Co., The, Cleveland, O.  
Northern Blower Co., Cleveland, O.  
♦ Swartwout, Ohio Blower—Ohio Body & Blower Co.,  
The, Cleveland, O.  
Pulmosan—Multi Metal Separating Screen Co., New  
York.

## HOODES, DRAFT.

Augmore—Augmore Mfg. Co., Cleveland, O.  
Hotstream—Hotstream Heater Co., Cleveland, O.

## HOODES, CATCH BASIN, DETACHABLE.

Palmer—J. A. Zurn Mfg. Co., Erie, Pa.

## HOODES, CHEMICAL AND FUME.

Alberene Stone Co., New York.

## HOODES, FORGE.

Canton Art Metal Co., Canton, O.  
Terwilliger's Sure Draft—Lourie Mfg. Co., Springfield,  
Ill.

## HOODES, HOT AIR FOR AISLE SEATS.

I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.

## HOODES, SAND BLAST.

The Safety Equipment Service Co., Cleveland, O.

## HOOKS, ASH CAN LIFTING.

National Tool Co., Brooklyn, N. Y.

## HOOKS, BATHROOM.

(See "Fittings, Bath Room.")

American Ring Co., Waterbury, Conn.  
Bay Ridge Specialty Co., Inc., Trenton, N. J.  
Columbus Brass Co., Columbus, O.  
Galard Co., The, Newark, N. J.  
Goetz—Goetz Brass Company, Chicago, Ill.  
Easy Set—J. H. Balmer Co., Passaic, N. J. (China).  
Russell, John M., Mfg. Co., Inc., The, Naugatuck, Conn.

## HOOKS, BEAM, PIPE HANGING.

Carpenter & Paterson, Boston, Mass.  
Crane Co., Chicago, Ill.  
Fee & Mason Mfg. Co., New York.  
General Fire Extinguisher Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Heartley Machine, Variety Iron & Tool Works,  
Toledo, O.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Modern Iron Works, Quincy, Ill.  
Modern Mfg. Co., The, Cleveland, Ohio.  
National Tube Co., Pittsburgh, Pa.  
Pittsburg Block & Mfg. Co., Pittsburgh, Pa.  
♦ Walworth Mfg. Co., Boston, Mass.

## HOOKS, BELT.

(See "Fasteners, Belt.")

Bristol—Durand—Bristol Co., The, Waterbury, Conn.  
Crescent Belt Fastener Co., New York, N. Y.

## HOOKS, BOX AND BALE HANDLING.

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.

National Tool Co., Brooklyn, N. Y.  
 Spang & Co., Butler, Pa. (marine).  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### HOOKS, BRASS, SHOWER CURTAIN.

Elgin Brass Co., New York, N. Y.  
 Waterbury Mfg. Co., Waterbury, Conn.

#### HOOKS, CHANDELIER.

◆ Kelly & Jones Co., The, Greensburg, Pa.  
 N. T. C.—National Tube Co., Pittsburg, Pa.  
 ◆ Walworth Mfg. Co., Boston, Mass.

#### HOOKS, CONDUCTOR OR RAIN LEADER.

Heartley Machine Variety Iron & Tool Wks., Toledo, O.

#### HOOKS, COTTON AND CARGO.

Johnson, Wm., Newark, N. J.  
 Marine Hardware-Equipment Co., South Portland, Me.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### HOOKS, DISCONNECTION, OIL WELL.

Norris, W. C., Tulsa, Okla.

#### HOOKS, "S" OR "B".

Acme Mfg. Co., Inc., Waterbury, Conn.  
 Bernz, Otto, Newark, N. J.  
 Bridgeport Chain Co., Bridgeport, Conn.  
 Chain Products Co., The, Cleveland, O.  
 Durst Mfg. Co., The, New York, N. Y.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
 Smith & Egge Mfg. Co., Bridgeport, Conn.  
 Wire Goods Co., The, Worcester, Mass.

#### HOOKS, FIRE.

Cliff & Guibert Co., New York, N. Y.

#### HOOKS, FIRE PAIL.

E. Jenckes Mfg. Co., Worcester, Mass.  
 Stanley Works, The, New Britain, Conn.

#### HOOKS, FLASHING.

Hauer, J. B., Brooklyn, N. Y.

#### HOOKS, GALVANIZED LEADER.

Hauer, J. B., Brooklyn, N. Y.

#### HOOKS, HOIST, DROP FORGED.

Billings & Spencer Co., Hartford, Conn.  
 Bonney Forge & Tool Works, Allentown, Pa.  
 Diriga—The Thos. Laughlin Co., Portland, Me.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 ◆ Vulcan—J. H. Williams & Co., Brooklyn, N. Y.  
 Warren Axe & Tool Co., Warren, Pa.  
 Weimer Chain & Iron Co., Lebanon, Pa.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### HOOKS, HOPPER AND CLOSET CLEANING.

Talz, Jacob, & Son, Philadelphia, Pa.

#### HOOKS, OIL WELL CAGING.

Spang—Spang & Company, Butler, Pa.

#### HOOKS, PACKING EXTRACTING.

Anderson Tool & Supply Co., Detroit, Mich.  
 Lightning—The Strong Machinery & Supply Co., New York, N. Y.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Universal—Racine Iron & Wire Works, Racine, Wis.  
 Verona Tool Works, Pittsburgh, Pa.

#### HOOKS, PIPE, DRIVE.

Berger Bros. Co., Philadelphia, Pa.  
 Bradford, Wm. A., Co., Quincy, Mass.  
 Carpenter & Paterson, Boston, Mass.  
 Crane Co., Chicago, Ill.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Eclipse—Cann & Saul, Philadelphia, Pa.  
 Eclipse—Thos. Devlin Mfg. Co., Philadelphia, Pa.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Hallett Iron Works, The, Harvey, Ill.  
 Hauer, J. B., Brooklyn, N. Y. (hand-forged).  
 ◆ Kelly & Jones Co., The, Greensburg, Pa.  
 Modern Iron Works, Quincy, Ill.  
 Moore, Joshua, Marseilles, Ill.

Pittsburg Valve, Foundry & Construction Co., Pittsburg, Pa.

Pittsburgh Valve & Fittings Co., Barberton, O.  
 Reznor—Reznor Mfg. Co., Mercer, Pa.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 ◆ Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### HOOKS, PLUMBERS' SHAPE OR PLUMBERS' SCRAPERS.

Bernz, Otto, Newark, N. J.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Hauer, J. B., Brooklyn, N. Y.  
 Irvington Mfg. Co., Irvington, N. J.  
 Johnson, Wm., Newark, N. J.  
 Marine Hardware-Equipment Co., South Portland, Me.  
 National Tool Co., Brooklyn, N. Y.  
 Vulcan Tool & Mfg. Co., Quincy, Mass.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### HOOKS, POT.

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Johnson, Wm., Newark, N. J.  
 National Tool Co., Brooklyn, N. Y.

#### HOOKS, SAFETY CAR.

Macomber & Whyte Rope Co., Kenosha, Wis.  
 ◆ Williams J. H. & Co., Brooklyn, N. Y.

#### HOOKS, FLAIN AND TWISTED.

◆ Youngstown Sheet & Tube Co., Youngstown, O.

#### HOOKS, STEEL.

◆ Pittsburgh Steel Co., Pittsburgh, Pa.  
 ◆ Youngstown Sheet & Tube Co., Youngstown, O.

#### HOPPERS, COAL & ASK.

Baker-Dunbar-Allen Sales Co., Cleveland, O.  
 Connery & Co., Inc., Philadelphia, Pa.  
 Green Engineering Co., East Chicago, Ind.  
 Littleford Bros., Cincinnati, Ohio.  
 Lakewood Engineering Co., Cleveland, Ohio.  
 Link-Belt Company, Chicago and Philadelphia.  
 New York Central Iron Works Co., Inc., Hagerstown, Md.

#### HOPPERS, CLOSET, LAUNCH AND SHIP.

Impervio—The Trenton Potteries Co., Trenton, N. J.  
 Maddock's Sons Co., Thomas, Trenton, N. J.

#### HOPPERS, CLOSET, PORCELAIN.

Capoco—Camden Pottery Co., Camden, N. J.  
 Cochran, Dragan & Co., Trenton, N. J.  
 Glenwood, Golden, Granada, Gunnison, Junior—F. N. Dubois & Co., Inc., The, New York, N. Y.  
 Maddock's Sons Co., Thomas, Trenton, N. J.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 New Jersey China Pottery Co., Trenton, N. J.  
 Penn Pottery Co., Philadelphia, Pa.  
 Resolute Pottery Co., Trenton, N. J.  
 Stratton Fire Clay Co., Empire, O.  
 Trenton Potteries Co., Trenton, N. J.  
 Union Sanitary Works, Noblesville, Ind.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### HOPPERS, CLOSET, PORCELAIN ENAMELED.

Bayley—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Merrie—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.

#### HOPPERS, CLOSET, RAILWAY CAR.

Clow & Sons, James B., Chicago, Ill.  
 Duner—Duner Co., Chicago, Ill.  
 Maddock & Sons Co., John, Trenton, N. J.  
 Maddock's Sons Co., Thomas, Trenton, N. J.  
 Northern—James B. Clow & Sons, Chicago, Ill.

#### HOPPERS, FIRE DOOR, ADJUSTABLE AND STOKING.

Vasil Steam Systems Co., Washington, D. C.

#### HOPPERS, SLOP.

(See also "Sinks, Slop.")

Bailey—The Casey-Hedges Co., Chattanooga, Tenn.  
 Bayley—American Foundry & Mfg. Co., St. Louis, Mo.  
 Bayley-Rundle Mfg. Co., Milwaukee, Wis.  
 Bignall Co., The, Medina, N. Y.  
 Concord Foundry Co., Concord, N. H.  
 Glenn, Mfg. Co., St. Charles, Ill.  
 Harris—American Foundry & Mfg. Co., St. Louis, Mo.  
 Harris-Rundle Mfg. Co., Milwaukee, Wis.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kupferle, John C., Foundry Co., St. Louis, Mo.

Pluvic—The Hydraulic Specialty Co., Philadelphia, Pa.  
Swett Iron Works, A. L., Medina, N. Y.  
Winslow & Co., Inc., Portland, Me.

#### HOPPERS, VITREOUS CHINA.

Maddock's Sons Co., Thomas, Trenton, N. J.  
Resolute Pottery Co., Trenton, N. J.  
Two Fired—Trenton Potteries Co., Trenton, N. J.  
Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### HORNS, SIGNAL AND WARNING.

Klaxon—Klaxon Company, Newark, N. J.

#### HORSE POWERS.

American Hoist & Derrick Co., St. Paul, Minn.  
♦ Deming Co., The, Salem, O. (pumping).  
Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
Goulds Mfg. Co., The, Seneca Falls, N. Y. (pumping).  
Howell & Co., R. R., Minneapolis, Minn.

#### HORSES, STEEL, FOLDING.

Frasse—Peter A. Frasse & Co., Inc., New York, N. Y.

#### HOSE, AIR BRAKE.

(See "Hose, Rubber, Air," and "Tubing, Flexible, Metallic.")

♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
Trade names—M. C. B., Safety.

#### HOSE, AUTOMOBILE RADIATOR.

A. B. C.—American Brake Lining Co., Lansdale, Pa.  
♦ Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
Clipper—Diamond Rubber Co., Inc., Akron, O.  
Diamond Rubber Co., Inc., The, Akron, O.  
Dominion Asbestos & Rubber Corp., New York.  
Duckwall Belting & Hose Co., Indianapolis, Ind.  
♦ Goodrich—The B. F. Goodrich Rubber Co., Akron, O.  
Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
Kobold—Kobold Sales Co., New Orleans, La.  
♦ Mechanical Rubber Co., The, Cleveland, O.  
Montgomery Bros., Inc., Philadelphia, Pa.  
National Asbestos Co., Germantown, Philadelphia, Pa.  
♦ Thermoid, Testoid—Thermoid Rubber Co., Trenton, N. J.  
♦ White King—Goodrich Rubber Co., B. F., Akron, O.

#### HOSE, BODIES, FOR MOTOR APPARATUS.

Pirsch, Peter, & Sons Co., Kenosha, Wis.

#### HOSE, CHEMICAL ENGINE.

(See "Hose, Rubber.")

#### HOSE, COKE.

♦ Bytumen—Quaker City Rubber Co., Philadelphia, Pa.  
Clipper—Diamond Rubber Co., Inc., Akron, O.  
G. P. Braided—Gutta Percha & Rubber Mfg. Co., New York.  
Hewitt Rubber Co., Buffalo, N. Y. Trade names—Linwood, Maywood.  
♦ New York Belting & Packing Co., New York.

#### HOSE, COTTON, AND COTTON RUBBER LINED.

Acme Rubber Mfg. Co., The, Trenton, N. J.  
Ajax—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
♦ Aquares—The Republic Rubber Co., Youngstown, O.  
Arctic Jacket—The Diamond Rubber Co., Akron, O.  
♦ Arno, Delva, Challenge, Losant, Mezen, Normal, Norka, Royal Motor, Reno, Sandow, Plymouth, Puritan, Scioto, Reno, trade names—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
Arrow—Empire Rubber Mfg. Co., Trenton, N. J.  
Baker—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
Bassick—W. H. Salisbury & Co., Inc., Chicago, Ill.  
♦ Beaconoid—Thermoid Rubber Co., Trenton, N. J.  
Belmont—Consolidated Rubber Co., Trenton, N. J.  
Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
Bi-Lateral—Bi-Lateral Fire Hose Co., Chicago, Ill.  
♦ Black Line—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
♦ Bloomfield—The Combination Rubber Co., Bloomfield, N. J.  
♦ Blue Line—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Blue Chain—The Empire Mfg. Co., Lockport, N. Y.  
♦ Boston Belting Corp., Boston, Mass.  
Bramold—Maguire Rubber Co., New York, N. Y.  
Buckley Rubber Co., J. W., New York, N. Y.  
♦ Bull Dog—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
♦ Cable—New York Belting & Packing Co., New York.  
Capital—Crescent Belting & Packing Co., Trenton, N. J.  
♦ Carbon—New York Belting & Packing Co., New York.  
Champion—C. C. C. Fire Hose Co., Canton Junction, Mass.

♦ Chariot—Republic Rubber Corp., Youngstown, O.  
Chief Croker—Hudson Mechanical Rubber Co., New York, N. Y.  
Chieftain—The B. F. Goodrich Rubber Co., Akron, O.  
Clermont, Hi-Test, Hudson—Hudson Mechanical Rubber Co., New York.  
♦ Columbia—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
♦ Combination—The Combination Rubber Co., Bloomfield, N. J.  
♦ Commander, Marathon—Goodrich Rubber Co., B. F., Akron, O.  
Comomic—Union Rubber & Asbestos Co., Trenton, N. J.  
Continental Rubber Works, Erie, Pa.  
Corker—Fairbanks, Morse & Co., Chicago, Ill.  
Crescent—Crescent Rubber & Packing Co., Trenton, N. J.  
Crown—Quaker City Rubber Co., Philadelphia, Pa.  
♦ Czar, Double Diamond, Dragon—New York Belting & Packing Co., New York, N. Y.  
Diamond Rubber Co., The, Akron, O.  
Dominion—Dominion Asbestos & Rubber Corp., New York.  
Double Service Packing Co., Philadelphia, Pa.  
Economy—Manhattan Rubber Mfg. Co., New York, N. Y.  
♦ Embroid D. J.—Thermoid Rubber Co., Trenton, N. J.  
Emblem—Maguire Rubber Co., New York, N. Y.  
Empire Tire & Rubber Co., Trenton, N. J. Trade names, Best, Hero, King, Reliance, Rival, Yale, Crescent.  
♦ Eureka, Paragon, Peerless, Pioneer, Red Cross, Trojan, Uncle Sam, U. S.—United States Rubber Co., Eureka Fire Hose Dept., New York.  
♦ Everoid—Thermoid Rubber Co., Trenton, N. J.  
Fabric Fire Hose Co., New York, N. Y.  
Falstaff—W. H. Salisbury & Co., Chicago, Ill.  
Foamite Firefoam Co., New York.  
♦ Girard—Wise & Bailey, Philadelphia, Pa.  
♦ Goodrich—The B. F. Goodrich Rubber Co., Akron, O.  
Goodyear Tire & Rubber Co., Akron, O.  
Grey King, White King—B. F. Goodrich Co., Akron, O.  
Guardian—Pioneer Rubber Mills, San Francisco, Cal.  
Gutta Percha & Rubber Mfg. Co., New York. Trade names, Nassau, G. P., Underwriter's, Ridgewood, Star-Ajax.  
♦ Hamilton Rubber Mfg. Co., Trenton, N. J.  
♦ Hector—The Republic Rubber Corp., Youngstown, O.  
Hendrie, W. C., Rubber Co., Torrance, Cal.  
Hercules—Crescent Belting & Packing Co., Trenton, N. J.  
Hewitt Rubber Co., Buffalo, N. Y. Trade names—Elmwood, Glenwood, Linwood, Hewitt Magnus, Heavy Municipal, Underwriters.  
♦ Hobson—Home Rubber Co., Trenton, N. J.  
Ideal—Fairbanks, Morse & Co., Chicago, Ill.  
♦ Imperial—Boston Belting Corp., Boston, Mass.  
Indestructene—The Combination Rubber Co., Bloomfield, N. J.  
Insurance—Maguire Rubber Co., New York.  
Intertex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
♦ Invincible—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Ironsides—C. C. C. Fire Hose Co., Canton Junction, Mass.  
♦ J. M.—Johns-Manville, Incorporated, New York, N. Y.  
Juanita—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Jupiter—The B. F. Goodrich Co., Akron, O.  
King—Empire Rubber & Tire Co., Trenton, N. J.  
Kobold—Kobold Sales Co., New Orleans, La.  
♦ Lenigh—The B. F. Goodrich Rubber Co., Akron, O.  
Lexox—New York Belting & Packing Co., New York.  
Lion, Moose—Diamond Rubber Co., Inc., Akron, O.  
Lock City—The Empire Mfg. Co., Lockport, N. Y.  
♦ Mahoney—The Republic Rubber Corp., Youngstown, O.  
Marvel—C. C. C. Fire Hose Co., Canton Junction, Mass.  
Marvel—Fairbanks, Morse & Co., Chicago, Ill.  
♦ Merit—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
♦ Meteor—The B. F. Goodrich Rubber Co., Akron, O.  
Model—Empire Rubber & Tire Co., Trenton, N. J.  
M. R. Co.—Maguire Rubber Co., New York, N. Y.  
Nemo—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Niagara—The Empire Mfg. Co., Lockport, N. Y.  
North Star—The B. F. Goodrich Co., Akron, O.  
O. & B.—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
♦ O. K. Underwriter—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Ontario—C. C. C. Fire Hose Co., Canton Junction, Mass.  
♦ Oregon—Home Rubber Co., Trenton, N. J.  
♦ Paramount—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Par-Vortex—Pilot—Kansas City Rubber & Belting Co., Kansas City, Mo.  
Patriot—C. C. C. Fire Hose Co., Canton Junction, Mass.  
Patrol—Fairbanks, Morse & Co., Chicago, Ill.  
Pennsylvania—The Pennsylvania Rubber Co., Jeanette, Pa.  
♦ Perfection-Jacketed—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Phoenix—Wise & Bailey, Philadelphia, Pa.  
♦ Planet—The B. F. Goodrich Rubber Co., Akron, O.

- Polaris**—Fairbanks, Morse & Co., Chicago, Ill.  
**Pometus**—Quaker City Rubber Co., Philadelphia, Pa.  
**Portage**—Diamond Rubber Co., Inc., Akron, O.  
**Princeton**—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
**Purple Line**—Pioneer Rubber Mills, San Francisco, Cal.  
**Python**, Elk—Diamond Rubber Co., Inc., Akron, O.  
 ♦ **Quaker City**—Quaker City Rubber Co., Philadelphia, Pa.  
**Ranger**—Union Rubber & Asbestos Co., Trenton, N. J.  
**Red Chain**—The Empire Mfg. Co., Lockport, N. Y.  
**Regent**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**Regent**—Dominion Asbestos & Rubber Corp., New York.  
**Reliance**—Pioneer Rubber Mills, San Francisco, Cal.  
**Rescue**—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
**Rex**—The Empire Mfg. Co., Lockport, N. Y.  
**Rival**—Empire Rubber & Tire Co., Trenton, N. J.  
**Rossendale-Reddaway Belting & Hose Co.**, The, Newark, N. J.  
**Rowe, A. C. & Son, Inc.**, New York, N. Y.  
**Royal Flush**—Crescent Belting & Packing Co., Trenton, N. J.  
**Safeside**—Fairbanks, Morse & Co., Chicago, Ill.  
**Safety Fire Extinguisher Co.**, The, New York, N. Y.  
**Salisbury**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**Sandfast**—C. C. C. Fire Hose Co., Canton Junction, Mass.  
 ♦ **Saxonoid**—Thermoid Rubber Co., Trenton, N. J.  
**Sceptre, Safety**—Fabric Fire Hose Co., New York.  
**Selector**—Maguire Rubber Co., New York, N. Y.  
 ♦ **Sioux**—Republic Rubber Corp., Youngstown, O.  
 ♦ **Solar**—The B. F. Goodrich Rubber Co., Akron, O.  
**Sovereign**—Dominion Asbestos and Rubber Corp., New York.  
**Sphinx**—Diamond Rubber Co., Inc., Akron, O.  
**Stalwart**—Consolidated Rubber Co., Trenton, N. J.  
**Standard**—Consolidated Rubber Co., Trenton, N. J.  
 ♦ **Sunol**—Home Rubber Co., Trenton, N. J.  
 ♦ **Symbaloid**—Thermoid Rubber Co., Trenton, N. J.  
**Thorobred**—Fairbanks, Morse & Co., Chicago, Ill.  
 ♦ **Titanic**—Goodrich Rubber Co., B. F., Akron, O.  
 ♦ **Tower**—The Republic Rubber Corp., Youngstown, O.  
 ♦ **Toweroid**—Thermoid Rubber Co., Trenton, N. J.  
 ♦ **Trimount**—Boston Belting Corp., Boston, Mass.  
 ♦ **Z X. L.**—The Mechanical Rubber Co., Cleveland, O.  
**Underwriters W. H. Salisbury & Co., Inc.**, Chicago, Ill.  
 ♦ **United & Globe Rubber Mfg. Co.**, Trenton, N. J.  
 ♦ **United States Rubber Co.**, Mechanical Goods Div., New York. Trade names—Amazon, B 4 Any, Burro, Gingo, Little Giant, Calumet, Cleveland, Royal, Sterling, Double Blue Line, Good Enough, Pilot, Three Blue Line, One Blue Line, Vernon, Pioneer, Eureka, Paragon, Red Cross, Trojan, Blue Diamond.  
**Veteran**—Fairbanks, Morse & Co., Chicago, Ill.  
**Victor**—Pioneer Rubber Mills, San Francisco, Cal.  
**Volunteer**—The Corneliuss Callahan Co., Boston, Mass.  
 ♦ **Voorhees Rubber Mfg. Co.**, Jersey City, N. J. Trade names, Cartaret, Cornell, Cosmos, Fire Model, Kearney, Lafayette.  
**Warren & Croton**—J. W. Buckley Rubber Co., New York, N. Y.  
**Warwick**—Fabric Fire Hose Co., New York, N. Y.  
**Wellington**—Wise & Bailey, Philadelphia, Pa.  
**White Cotton**—The Joseph W. Stokes Rubber Co., Trenton, N. J.  
 ♦ **White Cross, Tiger**—Home Rubber Co., Trenton, N. J.  
**Winner**—Consolidated Rubber Co., Trenton, N. J.  
**XXX**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**Yale**—Empire Rubber Mfg. Co., Trenton, N. J.

**HOSE COUPLINGS.**

(See "Couplings, Hose.")

**HOSE, DIVERS.**

(See "Hose, Rubber.")

**HOSE, ENGINE AND TENDER.**

(See "Hose, Rubber.")

- ♦
- United & Globe Rubber Mfg. Co.**
- , Trenton, N. J.

**HOSE, GAS.**

- ♦
- Akron**
- The B. F. Goodrich Rubber Co., Akron, O.
- 
- Breeze Mfg. Co.**
- , Newark, N. J.
- 
- Continental Rubber Works**
- , Erie, Pa.
- 
- Diamond Rubber Co.**
- , The, Akron, O.
- 
- Dominion Asbestos & Rubber Corp.**
- , New York, N. Y.
- 
- Electric**
- Electric Hose & Rubber Co., Wilmington, Del.
- 
- ♦
- Excelsior**
- Boston Belting Corp., Boston, Mass.
- 
- ♦
- Giant, Revere**
- United States Rubber Co., Mechanical Goods Div., New York.
- 
- Gutta Percha & Rubber Mfg. Co.**
- , New York, N. Y.
- 
- Hudson Mechanical Rubber Co.**
- , New York, N. Y.
- 
- ♦
- Imperial**
- Boston Belting Co., Boston, Mass.
- 
- Montgomery Bros., Inc.**
- , Philadelphia, Pa.
- 
- Mulconroy Co., Inc.**
- , Philadelphia, Pa.
- 
- Schoen-Jackson Co.**
- , Media, Pa.

**HOSE, GASOLINE**

- Best Test**
- Union Rubber & Asbestos Co., Trenton, N. J.
- 
- Conomic**
- Union Rubber & Asbestos Co., Trenton, N. J.
- 
- Diamond Rubber Co., Inc.**
- , The, Akron, O.
- 
- Everlasting, Rex**
- Chicago Tubing & Braiding Co., Chicago, Ill.
- 
- ♦
- Goodrich, Commander**
- B. F. Goodrich Rubber Co., Akron, O.
- 
- G. P. Braided**
- Gutta Percha & Rubber Mfg. Co., New York.
- 
- Mulconroy Co., Inc.**
- , Philadelphia, Pa.
- 
- ♦
- Penflex**
- Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
- 
- Portage, Titan**
- Diamond Rubber Co., Inc., Akron, Ohio.
- 
- ♦
- Puritan**
- Cincinnati Rubber Mfg. Co., Cincinnati, O.
- 
- Ranger**
- Union Rubber & Asbestos Co., Trenton, N. J.
- 
- ♦
- Rob Roy**
- Goodrich Rubber Co., B. F., Akron, O.
- 
- Triplexd**
- Metal Hose & Tubing Co., Inc., Brooklyn, N. Y.

**HOSE, HYDRAULIC.**

(See "Hose, Armored.")

**HOSE, LINES.**

(Manufacturers.)

- Beck, W. & C. Co.**
- , Lawrence, Mass.
- 
- ♦
- Niedner's, Chas., Sons Co., Inc.**
- , Malden, Mass.

(Trade Names used by Dealers and Manufacturers.)

- ♦
- Afmic**
- New York Belting & Packing Co., New York.
- 
- Alenco Underwriter, 1 & 2 Defender, Liberty, Union**
- Wm. & Chas. Beck Co., Lawrence, Mass.
- 
- Belmont, Elkshead, Waldorf**
- Fabric Fire Hose Co., New York, N. Y.
- 
- ♦
- Black Line Underwriters**
- Boston Woven Hose & Rubber Co., Cambridge, Mass.
- 
- ♦
- Blue Line**
- New York Belting & Packing Co., Ltd., New York, N. Y.
- 
- Cliff & Guilbert Co.**
- , New York, N. Y.
- 
- ♦
- Congress**
- Chas. Niedner's Sons Co., Inc., Malden, Mass.
- 
- ♦
- Delta**
- New York Belting & Packing Co., New York.
- 
- Dominion Asbestos & Rubber Corp.**
- , New York.
- 
- Efficient**
- The Empire Mfg. Co., Lockport, N. Y.
- 
- Emblem**
- Maguire Rubber Co., New York, N. Y.
- 
- Insurance**
- Fenwick-Reddaway, Newark, N. J.
- 
- I. X. L. Charles Nuhning & Bro.**
- , Cincinnati, O.
- 
- Jiffy**
- Jiffy Fire Hose Rack Co., New York, N. Y.
- 
- Kobold Sales Co.**
- , New Orleans, La.
- 
- Mascot**
- W. D. Allen Mfg. Co., Chicago, Ill.
- 
- M. R. Co.**
- Maguire Rubber Co., New York, N. Y.
- 
- Nella**
- W. D. Allen Mfg. Co., Chicago, Ill.
- 
- Perfecto**
- H. J. M. Howard Mfg. Co., Washington, D. C.
- 
- Red & Blue Line**
- The Rossendale-Reddaway Belting & Hose Co., Newark, N. J.
- 
- ♦
- Rendin**
- Chas. Niedner's Sons Co., Inc., Malden, Mass.
- 
- Rowe, A. C. & Son, Inc.**
- , New York, N. Y.
- 
- Rubber-ite-McIlroy Belting & Hose Co.**
- , Hammond, Ind.
- 
- Salisbury**
- W. H. Salisbury & Co., Inc., Chicago, Ill.
- 
- Security**
- Revere Rubber Co., Boston, Mass.
- 
- Selector**
- Maguire Rubber Co., New York, N. Y.
- 
- ♦
- Service**
- Boston Woven Hose & Rubber Co., Cambridge, Mass.
- 
- Standard**
- Empire Mfg. Co., Lockport, N. Y.
- 
- XXX**
- W. H. Salisbury & Co., Inc., Chicago, Ill.
- 
- Underwriters**
- W. H. Salisbury & Co., Inc., Chicago, Ill.
- 
- Underwriter**
- Double Service Packing Co., Philadelphia, Pa.
- 
- Underwriter**
- John Simmons Co., New York, N. Y.
- 
- Union Rubber & Asbestos Co.**
- , Trenton, N. J.
- 
- Vena**
- J. W. Buckley Rubber Co., New York, N. Y.
- 
- Windsor**
- American Belting Companies, Texas, Md.
- 
- ♦
- Yankee**
- Chas. Niedner's Sons Co., Inc., Malden, Mass.
- 
- Yankee Rendin**
- S. F. Hayward & Co., New York, N. Y.

**HOSE, METALLIC.**

(See "Tubing, Flexible, Metallic.")

**HOSE, MILL.**

(See "Hose, Cotton, Rubber Lined.")

**HOSE, OIL.**

- Best Test, Conomic, Ranger**
- Union Rubber & Asbestos Co., Trenton, N. J.

**HOSE, RUBBER.**

- Acme**
- The Acme Rubber Mfg. Co., Trenton, N. J.
- 
- Acorn**
- Kansas City Rubber & Belting Co., Kansas City, Mo.
- 
- ♦
- Aetna**
- New York Belting & Packing Co., New York.
- 
- ♦
- Akron**
- The B. F. Goodrich Rubber Co., Akron, O.
- 
- ♦
- American**
- Voorhees Rubber Mfg. Co., Jersey City, N. J.
- 
- Ametalhose**
- The American Metal Hose Co., Waterbury, Conn. (metal).

- Anchor Packing Co., The, Philadelphia, Pa.  
 Antarctic—The Diamond Rubber Co., Inc., Akron, O.  
 Arctic—The Diamond Rubber Co., Inc., Akron, O.  
 ♦ Arno—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Aqua—J. W. Buckley Rubber Co., New York, N. Y.  
 ♦ Atlantic—Quaker City Rubber Co., Philadelphia, Pa.  
 B.—J. W. Buckley Rubber Co., New York, N. Y.  
 Bay City—Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Bay State—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Beaver—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 Bell—Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ Belmont—Clement Restein Co., Philadelphia, Pa.  
 Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
 Black Cover—Consolidated Rubber Co., Trenton, N. J.  
 ♦ Bloomfield—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 ♦ Blue Bell—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Blue Jacket Cover—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Bock—The B. F. Goodrich Co., Akron, O.  
 ♦ Bolivian—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ Boston—Boston Belting Corp., Boston, Mass.  
 ♦ Boston Terrier—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Brandywine—Electric Hose & Rubber Co., Wilmington, Del.  
 Brown Bear—Fairbanks, Morse & Co., Chicago, Ill.  
 Buckskin—Goodall Rubber Co., Inc., Philadelphia, Pa.  
 Buckley, J. W., Rubber Co., New York. (Trade names B-Ox, Wabrow, Rud, Rebois, Octo, Vena, Maron, Bucko, Magnet, Dumol.)  
 Buffalo—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ Bull Dog—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Cable—New York Belting & Packing Co., New York.  
 Callahan Co., The, Cornelius, Boston, Mass.  
 ♦ Cambrinus—The Combination Rubber Co., Bloomfield, N. J.  
 ♦ Cameo—New York Rubber Co., New York, N. Y.  
 Canton—C. C. Fire Hose Co., Canton Junction, Mass.  
 Capitol—Consolidated Rubber Co., Trenton, N. J.  
 Capital—Crescent Belting & Packing Co., Trenton, N. J.  
 Capitol—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ Carbon—New York Belting & Packing Co., Ltd., New York, N. Y.  
 ♦ Carboy—New York Belting & Packing Co., New York.  
 ♦ Cartaret—Voorhees Rubber Co., Jersey City, N. J.  
 ♦ Cascade—The B. F. Goodrich Rubber Co., Akron, O.  
 Celtic—The Joseph W. Stokes Rubber Co., Trenton, N. J.  
 Celtic—The Henry Johnson Co., Jersey City, N. J.  
 Central Rubber Co., The, Philadelphia, Pa.  
 Challenge, Delva, Norwood, Royal—Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
 Challenge—The Henry Johnson Co., Jersey City, N. J.  
 ♦ Charlotte—Republic Rubber Co., Youngstown, O.  
 Chief—Fairbanks, Morse & Co., Chicago, Ill.  
 ♦ Cincinnati—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Clermont—Hudson Mechanical Rubber Co., New York.  
 Cleveland Rock Drill Co., Cleveland, O.  
 ♦ Clifton—New York Belting & Packing Co., New York.  
 Clipper—The Diamond Rubber Co., Inc., Akron, O.  
 Collisene—Electric Hose & Rubber Co., Wilmington, Del.  
 Columbia—Empire Rubber & Tire Co., Trenton, N. J.  
 ♦ Combination—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 ♦ Comet—New York Belting & Packing Co., New York.  
 ♦ Commander—B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Commercial—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Competition—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Compressor—Goodall Rubber Co., Inc., Philadelphia, Pa.  
 ♦ Congo—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Conomic—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Conquerer—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 ♦ Conservatory—Boston Woven Hose & Rubber Co., Boston, Mass.  
 Continental—Continental Rubber Works, Erie, Pa.  
 ♦ Corporal—Quaker City Rubber Co., The, Philadelphia, Pa.  
 ♦ Corsair—Quaker City Rubber Co., The, Philadelphia, Pa.  
 ♦ Cosmos, Cornell, Lafayette—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 ♦ Cowen Steam—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Crack Proof—Pioneer Rubber Mills, San Francisco.  
 Crescent—Crescent Belting & Packing Co., Trenton, N. J.  
 Crescent—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Crescent, Defiance—Diamond Rubber Co., Inc., Akron, Ohio.  
 ♦ Crown—Quaker City Rubber Co., Philadelphia, Pa.  
 Cyclone—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦ Csar—New York Belting & Packing Co., New York.  
 ♦ Dandy—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Danube—The Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.  
 ♦ Dauntless—Boston Woven Hose & Rubber Co., Boston, Mass.  
 Defiance—Diamond Rubber Co., Inc., Akron, Ohio.  
 ♦ Delhi—The Manhattan Rubber Mfg. Co., Passaic, N. J.  
 ♦ Delta—New York Belting & Packing Co., New York.  
 ♦ Deluge—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Demon—Consolidated Rubber Co., Trenton, N. J.  
 Diamond 400—The Diamond Rubber Co., Inc., Akron, O.  
 Dominion Asbestos and Rubber Corp., New York, N. Y.  
 ♦ Double Diamond—New York Belting & Packing Co., Ltd., New York, N. Y.  
 Double Service—Double Service Packing Co., Philadelphia, Pa.  
 Dragon—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦ Dragon—New York Belting & Packing Co., New York.  
 ♦ Dreadnaught—Manhattan Rubber Mfg. Co., The, Passaic, N. J.  
 Dule—Consolidated Rubber Co., Trenton, N. J.  
 Durable—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ Dutchess—New York Rubber Co., New York, N. Y.  
 Dynamite—Mulconroy Co., Inc., Philadelphia, Pa.  
 Eagle—Peters Pump Co., Kewanee, Ill.  
 Earl—Dominion Asbestos & Rubber Corp., New York, N. Y.  
 ♦ Ebonite—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Economy—Manhattan Rubber Mfg. Co., The, Passaic, N. J.  
 ♦ Edgewater—Quaker City Rubber Co., Philadelphia, Pa.  
 Edson—Edson Mfg. Co., Boston, Mass.  
 Eel—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦ 1846 Para—New York Belting & Packing Co., Ltd., New York, N. Y.  
 ♦ Elk—The Diamond Rubber Co., Inc., Akron, O.  
 ♦ Electric Hose & Rubber Co., Wilmington, Del. (Trade names—Electric, Velvet, Colossus, Christiansa, Supero, Marvelo, Barcus, Standard, Delaware, Nocer, Buoy, Callente, Cyrus, Constant, Eddy-stone, Laconic, Mineralite, Oleic, Onoko, Oxy-acetylene, Pliant, Pocomoke, Quintuple, Supple, Snowdrop, Tamaqua, Tarpon, Trouble, Savers, Zenobia, Golconda, Nanticoke, Rialto, Valhalla, Alladin, Tres, Acetic, Seaford, Terrapin, Coalings, Blacksnake, Blackfin, Caribou Corrugated, Crusoe, Defiance, Electro, Kaffir, Magnate, Milton, Moravia, Pitts, Redfin, Redsnake, Ruddy, Selkirk, Uganda.)  
 Electric—United & Globe Rubber Co., Trenton, N. J.  
 Emblem, Efficient, Trojan—Maguire Rubber Co., New York, N. Y.  
 Empire Best—Empire Tire & Rubber Corp., Trenton, N. J.  
 ♦ Emulos—Quaker City Rubber Co., Philadelphia, Pa.  
 Equality—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ Essex—The Combination Rubber Co., Bloomfield, N. J.  
 ♦ Falcon—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Federal—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 ♦ Fire Model—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 Fireproof—Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.  
 ♦ Firette—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Flexbraid—W. H. Sallabury & Co., Inc., Chicago, Ill.  
 ♦ Florist—The B. F. Goodrich Rubber Co., Akron, O.  
 Flushing—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Fulton—The Manhattan Rubber Mfg. Co., Passaic, N. J.  
 ♦ Garden City—New York Belting & Packing Co., New York, N. Y.  
 Garnet—Mulconroy Co., Inc., Philadelphia, Pa.  
 Gem—Mulconroy Co., Inc., Philadelphia, Pa.  
 Genesee—Consolidated Rubber Co., Trenton, N. J.  
 Girard—Wise & Bailey, Philadelphia, Pa.  
 ♦ Gleaner—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Globe—United & Globe Rubber Co., Trenton, N. J.  
 Golden Gate—Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Good Luck—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Goodrich Anchor—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Granger Agricultural—Boston Woven Hose & Rubber Co., Boston, Mass.  
 ♦ Granger—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Gulf Antelope—The Diamond Rubber Co., Inc., Akron, O.  
 Gutta Percha Rubber Mfg. Co., New York, Trade names, Franklin, Harbor, Montawk, Triangle.  
 ♦ Hamilton Rubber Mfg. Co., Trenton, N. J.  
 ♦ Harvester—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Heather—Fairbanks, Morse & Co., Chicago, Ill.  
 ♦ Hector—Republic Rubber Co., Youngstown, O.  
 ♦ Hercules—Quaker City Rubber Co., Philadelphia, Pa.



- Hercules—Wise & Bailey, Philadelphia, Pa.  
 Hero—Empire Tire & Rubber Corp., Trenton, N. J.  
 Hero—Mulconroy Co., Inc., Philadelphia, Pa.  
 Hevea—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Hewitt Rubber Co., Buffalo, N. Y. (Trade names—Magnus, Elmwood, Linwood, Maywood, Hewitt Magnus.)
- ◆ Hipsire—Quaker City Rubber Co., Philadelphia, Pa.  
 Hi-Test Hudson—Hudson Mechanical Rubber Co., New York, N. Y.
- ◆ Home Rubber Co., Trenton, N. J. Trade names—Extra, Faultless, Jumbo, N. B. O., Value, Water Snake, White Cross, World.  
 Hydraulic—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Ideal—The Akron Belting Co., Akron, O.  
 Independence—C. C. C. Fire Hose Co., Canton Junction, Mass.
- ◆ Indestructene—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Indestructible—New York Belting & Packing Co., New York, N. Y.
- ◆ Iroquois—Fairbanks, Morse & Co., Chicago, Ill.  
 Ivy—Bowers Rubber Works, San Francisco, Cal.  
 I. X. L.—Chas. Nuhling & Bros., Cincinnati, O.  
 J. M. Hose—Johns-Manville Inc., New York, N. Y.
- ◆ Jubilee—New York Belting & Packing Co., New York, N. Y.  
 Judson—Goodall Rubber Co., Inc., Philadelphia, Pa.  
 Kaptan—Quaker City Rubber Co., Philadelphia, Pa.  
 Karmine, Kernel, Ketmar—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Kearney—Voorhees Rubber Co., Jersey City, N. J.  
 Kinco—Electric Hose & Rubber Co., Wilmington, Del.  
 King—Empire Tire & Rubber Corp., Trenton, N. J.  
 Klamath—Pioneer Rubber Mills, San Francisco, Cal.  
 Kinkno—Consolidated Rubber Co., Trenton, N. J.  
 Knowlton Rubber Co., Geo. W., Boston, Mass.  
 Kobold—Kobold Sales Co., New Orleans, La.
- ◆ Korona—New York Belting & Packing Co., New York, N. Y.  
 Kortlandt—The Manhattan Rubber Mfg. Co., Passaic, N. J.
- ◆ Korker Oven (Coke Oven)—Quaker City Rubber Co., Philadelphia, Pa.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Laurel—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Leader—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ◆ Legrain—Goodrich Rubber Co., B. F., Akron, O.  
 Lenox—New York Belting & Packing Co., New York, N. Y.  
 Liberty, Vitalic—Continental Rubber Works, Erie, Pa.
- ◆ Lion Pacific—Diamond Rubber Co., Inc., Akron, O.  
 Live Oak—Pioneer Rubber Mills, San Francisco, Cal.  
 Long Life—Whitehead Bros Rubber Co., Trenton, N. J.  
 Losant—Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
- ◆ Magic—New York Belting & Packing Co., Ltd., New York, N. Y.  
 Magnet—J. W. Buckley Rubber Co., New York, N. Y.  
 Mahoney—Republic Rubber Co., Youngstown, O.  
 Mainstay—Goodrich Rubber Co., B. F., Akron, O.  
 Majer—Quaker City Rubber Co., Philadelphia, Pa.  
 Maltese Cross—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Maron—J. W. Buckley Rubber Co., New York, N. Y.  
 Marshal—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- ◆ Media Merrimac—Empire Tire & Rubber Corp., Trenton, N. J.  
 Mercer Rubber Co., Hamilton Square, N. J.
- ◆ Milo—Boston Woven Hose & Rubber Co., Boston, Mass.
- ◆ Model—Mulconroy Co., Inc., Philadelphia, Pa.  
 Monarch—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Montana—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Montank—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Monterey, Wyoga—Goodyear Tire & Rubber Co., Akron, O.
- ◆ Moose—The Diamond Rubber Co., Inc., Akron, O.  
 Mor-Econ—Goodrich Rubber Co., B. F., Akron, O.  
 Motor—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 M. R. C.—Maguire Rubber Co., New York, N. Y.  
 Mulconroy—Mulconroy Co., Inc., Philadelphia, Pa.  
 Multiplex—Consolidated Rubber Co., Trenton, N. J.
- ◆ Multiplex—New York Belting & Packing Co., New York, N. Y.  
 Nassau—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Native—Pioneer Rubber Mills, San Francisco, Cal.  
 Neptune—Quaker City Rubber Co., Philadelphia, Pa.  
 New Era—Fabric Fire Hose Co., New York, N. Y.  
 New York Rubber Co., New York, N. Y.  
 Nonpareil—S. F. Hayward & Co., New York, N. Y.
- ◆ Norka—Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
- ◆ Norse—Quaker City Rubber Co., Philadelphia, Pa.  
 Nuhling's—Chas. Nuhling & Bro., Cincinnati, O.
- ◆ Nymph—Quaker City Rubber Co., Philadelphia, Pa.  
 Oak—Fairbanks, Morse & Co., Chicago, Ill.  
 Octo—J. W. Buckley Rubber Co., New York, N. Y.  
 Old Reliable—Wise & Bailey, Philadelphia, Pa.
- ◆ Olympia—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ◆ Opal—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Orient—Quaker City Rubber Co., Philadelphia, Pa.  
 Owl—Pioneer Rubber Mills, San Francisco, Cal.  
 Ox—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Oxford—New York Belting & Packing Co., New York, N. Y.
- ◆ Pallsade—New York Belting & Packing Co., New York, N. Y.
- ◆ Pansy—Pioneer Rubber Mills, San Francisco, Cal.  
 Par-Vortex-Pilot—Kansas City Rubber & Belting Co., Kansas City, Mo.
- ◆ Patriot—C. C. C. Fire Hose Co., Canton Junction, Mass.  
 Pedro—Republic Rubber Co., The, Youngstown, O.
- ◆ Penflex—Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
- ◆ Perfected—The Peerless Rubber Mfg. Co., New York, N. Y.  
 Perfection—Boston Woven Hose & Rubber Co., Boston, Mass. (red).
- ◆ Philkob—James I. Brown, New York, N. Y.
- ◆ Pilgrim—Planet Goodrich Rubber Co., B. F., Akron, Ohio.
- ◆ Plymouth—The Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ◆ Polar, Python, Pacific—Diamond Rubber Co., Inc., The, Akron, O.
- ◆ Power—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 Prospect and Pyramid—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Protection—Woven Steel Hose & Rubber Co., Trenton, N. J.
- ◆ Puritan—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Puritan—New York Belting & Packing Co., New York, N. Y.
- ◆ Quaker City Rubber Co., Philadelphia, Pa. (Trade names—Corporal, Cassair, Emulos, Karmine, Kernel, Ketmar, Majer, Norse, Nymph, Orient, Para, Reding, Sarjent, Standard, Tioga, Edgewater, Hipsire, Norwald, Pomona, Agton, Ceres, Pralry, Red Acre.)
- ◆ Rainbow Label—The Peerless Rubber Mfg. Co., New York, N. Y.
- ◆ Ramapo—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Ranger—Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ Rebus—J. W. Buckley Rubber Co., New York, N. Y.  
 Red Jacket, Red Cover—Consolidated Rubber Co., Trenton, N. J.
- ◆ Reel—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ◆ Regal—The Henry Johnson Co., Jersey City, N. J.  
 Regent—Dominion Asbestos & Rubber Corp., New York, N. Y.
- ◆ Republic Rubber Co., The, Youngstown, O.  
 Rescue—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Rex Fire Appliance Co., New York, N. Y.
- ◆ Ridgewood—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Ringmeter, Wonderful, Yankee—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Rival—Empire Rubber & Tire Co., Trenton, N. J.
- ◆ Rope Rap—New York Rubber Co., New York, N. Y.
- ◆ Rough Bore—Empire Rubber Mfg. Co., Trenton, N. J.
- ◆ Roxbro—Boston Belting Corp., Boston, Mass.
- ◆ Royal Agricultural—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ◆ Royal Flush—Crescent Belting & Packing Co., Trenton, N. J.
- ◆ R. R. S.—New York Belting & Packing Co., New York, N. Y.  
 Ruby—Consolidated Rubber Co., Trenton, N. J.  
 Rud Wabron—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Runic—Consolidated Rubber Co., Trenton, N. J.
- ◆ Saco—New York Belting & Packing Co., New York, N. Y.
- ◆ Safety—United & Globe Rubber Co., Trenton, N. J.
- ◆ Sanco—The Republic Rubber Co., Youngstown, O.
- ◆ Sandow—The Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ◆ Sarjent, Sea Spray, Standard—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Schoen-Jackson Co., Media, Pa.
- ◆ Seal Rock—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Select—The Henry Johnson Co., Jersey City, N. J.
- ◆ Selector—Maguire Rubber Co., New York, N. Y.
- ◆ Service—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ◆ Sharon—Consolidated Rubber Co., Trenton, N. J.
- ◆ Shield High Grade—The Mechanical Rubber Co., Cleveland, O.
- ◆ Sioux—The Republic Rubber Co., Youngstown, O.
- ◆ Sovereign—Dominion Asbestos & Rubber Corp., New York, N. Y.
- ◆ Sphinx, Star—The Diamond Rubber Co., Inc., Akron, O.
- ◆ Spider—New York Belting & Packing Co., New York, N. Y.
- ◆ S. S. S.—Goodall Rubber Company, Inc., Philadelphia, Pa.
- ◆ S. T.—Home Rubber Co., Trenton, N. J.
- ◆ Star, Sunset—Consolidated Rubber Co., Trenton, N. J.
- ◆ Star, Zuzu—Diamond Rubber Co., Inc., Akron, O.
- ◆ Steamship—J. W. Buckley Rubber Co., New York, N. Y.
- ◆ Sterling—New York Belting & Packing Co., New York, N. Y.
- ◆ Stonewall—Maguire Rubber Co., New York, N. Y.
- ◆ Success—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Summit—The B. F. Goodrich Rubber Co., Akron, O.
- ◆ Sunproof—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Sunset—Pioneer Rubber Mills, San Francisco, Cal.
- ◆ Superheat—The B. F. Goodrich Rubber Co., Akron, O.



- Superior—Consolidated Rubber Co., Trenton, N. J.  
 Tannhauser—Wise & Bailey, Philadelphia, Pa.  
 Tempest—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Test—New York Belting & Packing Co., Ltd., New York, N. Y.  
 ♦ Tidal—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Tiger—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Tioga—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Titan—The Diamond Rubber Co., Inc., Akron, O.  
 ♦ Tonka—The Republic Rubber Co., Youngstown, O.  
 ♦ Tornado—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Torrent—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Tower—Republic Rubber Corp., Youngstown, O.  
 ♦ Tribune—Continental Rubber Works, Erie, Pa.  
 ♦ Triplexx—XXX—Metal Hose & Tubing Co., Inc., Brooklyn, N. Y.  
 ♦ Triton—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Tuckahoe—Consolidated Rubber Co., Trenton, N. J.  
 ♦ Tuxedo—New York Belting & Packing Co., New York, N. Y.  
 ♦ Union—Voorhees Rubber Mfg. Co., Jersey City, N. J.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Trade names—Globe, Montana, Safety.  
 United States Flexible Metallic Tubing Co., Los Angeles, Cal.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York. (Trade names—Agricultural Bengal, Buckeye, Chicago Standard, Cleveland Jacket, Elephant, Giant, Granite, Harlem, High Grade, High Pressure, Ogden, Corker, Champion, Pontiac, Anchor, Erie, Meruco, Wetmore, Marco, Old Gold, Palladium, High Grade, Buckeye, Popular, Blue Ribbon, Duplex, Perfected Construction, Rainbow Label, Anaconda, Peerless Knicker, Lakeside, No. 4810, terling, Reliance, Rainbow Ribbon, Royal, Huron, Standard, Victor, Four Ace, Shawmut, Revere, Perfected, Neptune, Agra, Mogul, Giant Red, Giant Black, Amazon, No. 8895, Dexter Pilot, Popular.)  
 ♦ Universal—Boston Belting Co., Boston, Mass.  
 ♦ Velvet—The Pennsylvania Rubber Co., Jeannette, Pa.  
 ♦ Victor—Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ Viking—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Voorhees Rubber Co., Jersey City, N. J. Trade names—American, Bostwick, Federal, Power, Union, Conqueror, Contest, Sensation, Corona.  
 ♦ Vulcan—New York Belting & Packing Co., New York, N. Y.  
 ♦ Wallabout—The Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Wantago—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Warranted 2 X. L.—The Mechanical Rubber Co., Cleveland, O.  
 ♦ Warsaw—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Watts' Oil Proof—John M. Watts' Sons, Philadelphia, Pa.  
 ♦ Wearo—Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Whirlpool—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ White Anchor—The B. F. Goodrich Rubber Co., Akron, Ohio.  
 ♦ Whitehead Bros. Rubber Co., The, Trenton, N. J.  
 ♦ White Star—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Willow—New York Belting & Packing Co., New York, N. Y.  
 ♦ Winner—Consolidated Rubber Co., Trenton, N. J.  
 ♦ Wizard—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ X. L.—New York Belting & Packing Co., New York, N. Y.  
 ♦ X, XX, XXX, XXXX and XXXXX—Electric Hose & Rubber Co., Wilmington, Del.  
 ♦ Yale—Empire Tire & Rubber Corp., Trenton, N. J.  
 ♦ Yankee Reel, Ringmeter—Quaker City Rubber Co., Philadelphia, Pa.

## HOSE, RUBBER, ACID.

- ♦ Beaconoid—Thermoid Rubber Co., Trenton, N. J.  
 ♦ Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Canfield Rubber Co., The, Bridgeport, Conn.  
 ♦ Carlgain—B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Conomic—Union Rubber & Asbestos Co., Trenton, N. J.  
 Continental Rubber Works, Erie, Pa.  
 ♦ Crown—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Diamond Rubber Co., Inc., The, Akron, O.  
 ♦ Dominion Asbestos & Rubber Corp., New York.  
 ♦ Electric Hose & Rubber Co., Wilmington, Del.  
 ♦ Electric—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 ♦ Everoid—Thermoid Rubber Co., Trenton, N. J.  
 ♦ Excelsior—Boston Belting Corp., Boston, Mass.  
 ♦ Globe—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Goodall Rubber Co., Inc., Philadelphia, Pa.  
 ♦ Goodrich—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Goodrich—B. F. Goodrich Rubber Co., Akron, O.  
 Tradenames, Maltese Cross, Ridgewood.  
 ♦ Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Hewitt Rubber Co., Buffalo, N. Y. (Trade names—Underwriters, Elmwood, Linwood, Magnus.)  
 ♦ Hudson Mechanical Rubber Co., New York, N. Y.  
 ♦ Imperial—Boston Belting Corp., Boston, Mass.  
 ♦ Maguire Rubber Co., New York, N. Y.

- Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 ♦ Par, Vortex, Pilot—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦ Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Quaker City—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Ranger—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Revere Rubber Co., Chelsea, Mass. "Four Ace," "Giant," "Revere."  
 ♦ Stokes Rubber Co., The Joseph W., Trenton, N. J.  
 ♦ Super Elevator—Goodrich Rubber Co., B. F., Akron, O.  
 ♦ Titan, Sphinx—Diamond Rubber Co., Inc., Akron, O.  
 ♦ Voorhees Rubber Mfg. Co., Jersey City, N. J.

## HOSE, RUBBER, AIR.

- Aero—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Akron, Whitecover—Goodrich Rubber Co., B. F., Akron, O.  
 Allen Fire Department Supply Co., The, Providence, Rhode Island.  
 Ametalhose—American Metal Hose Co., Waterbury, Conn. (metal).  
 Antipeel—Ingersoll-Rand Co., New York, N. Y.  
 ♦ Beaconoid—Thermoid Rubber Co., Trenton, N. J.  
 ♦ Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Black Snake—Electric Hose & Rubber Co., Wilmington, Del.  
 ♦ Boston Terrier—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Bull Dog—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Carlund Manufacturing Co., New York City.  
 ♦ Chicago Pneumatic—Chicago Pneumatic Tool Co., New York.  
 ♦ Cincinnati—Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
 ♦ Clermont, Hi-Test, Hudson—Hudson Mechanical Rubber Co., New York.  
 ♦ Cleveland Rock Drill Co., Cleveland, O.  
 ♦ Conomic—Union Rubber & Asbestos Co., Trenton, N. J.  
 Continental Rubber Works, Erie, Pa.  
 ♦ Cowen—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Crown—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Defiance—Diamond Rubber Co., Inc., Akron, O.  
 ♦ Diamond—Diamond Rubber Co., Inc., The, Akron, O.  
 ♦ Dominion Asbestos & Rubber Corp., New York.  
 ♦ Double Service Packing Co., Philadelphia, Pa.  
 ♦ Ebonite—Quaker City Rubber Co., Philadelphia.  
 ♦ Everoid—Thermoid Rubber Co., Trenton, N. J.  
 ♦ Excelsior—Boston Belting Corp., Boston, Mass.  
 ♦ Falcon—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Federal Metal Hose Corp., Buffalo, N. Y.  
 ♦ Forsyth—Boston Belting Co., Boston, Mass.  
 ♦ Giant—Revere Rubber Co., Boston, Mass.  
 ♦ Girard—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Globe—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 ♦ Gulf, Lion—Diamond Rubber Co., Inc., Akron, O.  
 ♦ Gutta Percha & Rubber Mfg. Co., New York, Trade names, G. P. Braided, M. C. B., Maltese Cross, Range, Ridgewood, Wallabout.  
 ♦ Invincible—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Iron Clad—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 M. C. B., U. S.—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ M. C. B.—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ M. C. B.—United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Mechanical Rubber Co., The, Chicago, Ill.  
 ♦ New Process—Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 ♦ New York Rubber Co., New York, N. Y.  
 ♦ Norwood—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ Par, Vortex, Pilot—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 ♦ Peerless Rubber Mfg. Co., The, New York, N. Y.  
 ♦ Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa. (metal).  
 ♦ Phoenix—Boston Belting Co., Boston, Mass.  
 ♦ Pilot—Revere Rubber Co., Boston, Mass.  
 ♦ Portage, Sphinx, Titan—Diamond Rubber Co., Inc., Akron, O.  
 ♦ Quaker City—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Quarry—The B. F. Goodrich Rubber Co., Akron, O.  
 ♦ Ranger—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Rescue—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Resistoil—Brunner Mfg. Co., Utica, N. Y.  
 ♦ Revere—Revere Rubber Co., Boston, Mass.  
 ♦ Ridgewood—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Roxbro—Boston Belting Co., Boston, Mass.

- ♦ **Safety**—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ♦ **Saxonoid**—Thermoid Rubber Co., Trenton, N. J.
- ♦ **Seal Rock**—Pioneer Rubber Mills, San Francisco, Cal.
- ♦ **Service**—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ♦ **SSS**—Goodall Rubber Co., Philadelphia, Pa.
- ♦ **Sunset**—Pioneer Rubber Mills, San Francisco, Cal.
- ♦ **Tiger**—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- ♦ **Triold**—Thermoid Rubber Co., Trenton, N. J.
- ♦ **Universal**—Boston Belting Co., Boston, Mass.
- ♦ **Veribest**—Cleveland Pneumatic Tool Co., Cleveland, Ohio.
- ♦ **Victor**—Mulconroy Co., Inc., Philadelphia, Pa.
- ♦ **Voorhees Rubber Mfg. Co.**, Jersey City, N. J. Trade names, American, Boreas, Corona, Federal, Numatic, Union.
- ♦ **Wallabout**—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ♦ **Walworth Mfg. Co.**, Boston, Mass.
- ♦ **Westinghouse Traction Brake Co.**, Pittsburgh, Pa.
- ♦ **Yellow Jacket**—J. W. Buckley Rubber Co., New York.

#### HOSE, RUBBER, ARMORED.

- ♦ **Akron**—B. F. Goodrich Rubber Co., The, Akron, O.
- ♦ **American Metal Hose Co.**, Waterbury, Conn.
- ♦ **Boston Belting Co.**, Boston, Mass.
- ♦ **Defender**—Woven Steel Hose & Rubber Co., Trenton, N. J.
- ♦ **Diamond Rubber Co., Inc.**, The, Akron, O. Trade names—Diamond, Titan, Sphinx, Gulf, Moose, Clipper.
- ♦ **Dominion Asbestos & Rubber Corp.**, New York.
- ♦ **Dynamite, Garnet, Model**—Mulconroy Co., Inc., Philadelphia, Pa.
- ♦ **Electric**—Electric Hose & Rubber Co., Wilmington, Del.
- ♦ **Electric**—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ♦ **Flexible Armored Hose Corp.**, Buffalo, N. Y.
- ♦ **Globe**—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ♦ **The Gutta Percha & Rubber Mfg. Co.**, New York, N. Y.
- ♦ **Hewitt Rubber Co.**, Buffalo, N. Y.
- ♦ **Interlocking**—Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.
- ♦ **Invincible**—J. W. Buckley Rubber Co., New York.
- ♦ **La Favorite Rubber Mfg. Co.**, Paterson, N. J.
- ♦ **New Process**—Mulconroy Co., Inc., Philadelphia, Pa.
- ♦ **Norwood, Challenge, Royal**—Cincinnati Rubber Co., Cincinnati.
- ♦ **O-K**—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ♦ **Par-Vortex-Pilot**—Kansas City Rubber & Belting Co., Kansas City, Mo.
- ♦ **Pennsylvania Rubber Co.**, The, Jeannette, Pa.
- ♦ **Perfection**—Woven Steel Hose & Rubber Co., Trenton, N. J.
- ♦ **Pioneer Rubber Mills**, San Francisco, Cal.
- ♦ **Quaker City Rubber Co.**, Philadelphia, Pa.
- ♦ **Revere Rubber Co.**, Boston, Mass.
- ♦ **Special**—The E. R. Northrop Co., New York, N. Y.
- ♦ **Sphincer Grip**—The E. R. Northrop Co., New York, N. Y.
- ♦ **Sprague Electric Works**, New York, N. Y.
- ♦ **Standard**—The E. R. Northrop Co., New York, N. Y.
- ♦ **United & Globe Rubber Mfg. Co.**, Trenton, N. J.
- ♦ **Woven Steel Hose & Rubber Co.**, Trenton, N. J.

#### HOSE, RUBBER, ASBESTOS COVERED.

- ♦ **Diamond Rubber Co., Inc.**, The, Akron, O.
- ♦ **Dominion Asbestos & Rubber Corp.**, New York.
- ♦ **Electric**—Electric Hose & Rubber Co., Wilmington, Del.
- ♦ **Rainbow**—United States Rubber Co., Mechanical Goods Div., New York.

#### HOSE, SAND BLAST.

- ♦ **Best Test, Conomie, Ranger**—Union Rubber & Asbestos Co., Trenton, N. J.

#### HOSE, STEAM.

- (See "Hose, Rubber" and "Tubing, Flexible, Metallic.")
- ♦ **United & Globe Rubber Mfg. Co.**, Trenton, N. J. Trade names—Globe, Montana, Safety.

#### HOSE, SUCTION.

- ♦ **Best Test**—Union Rubber & Asbestos Co., Trenton, N. J.
- ♦ **Broncho, Sandow**—Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ♦ **Burmout**—Goodall Rubber Co., Inc., Philadelphia, Pa.
- ♦ **C. C. Fire Hose Co.**, Canton Junction, Mass.
- ♦ **Clermont**, Hi-Test-Hudson—Hudson Mechanical Rubber Co., New York, N. Y.
- ♦ **Clipper**—Diamond Rubber Co., Inc., The, Akron, O.
- ♦ **Conomie**—Union Rubber & Asbestos Co., Trenton, N. J.
- ♦ **Continental Rubber Works**, Erie, Pa.
- ♦ **Diamond Rubber Co., Inc.**, The, Akron, O.
- ♦ **Dominion Asbestos & Rubber Corp.**, New York.

- ♦ **Elephant, Beaver, Bengal**—Mechanical Rubber Co., Chicago, Ill.
- ♦ **Goodyear Tire & Rubber Co.**, Akron, O.
- ♦ **Gutta Percha Rubber & Mfg. Co.**, New York, Trade names, Maltese Cross, Ridgewood, Special Contractors, Wallabout.
- ♦ **La Favorite Rubber Mfg. Co.**, Paterson, N. J.
- ♦ **Marco, V-X-L-Victor**, Buckeye, Popular—Mechanical Rubber Co., Cleveland, O.
- ♦ **New York Rubber Co.**, New York, N. Y.
- ♦ **Portage, Polar**—Diamond Rubber Co., Inc., Akron, O.
- ♦ **Ranger**—Union Rubber & Asbestos Co., Trenton, N. J.
- ♦ **Sentry**—Goodrich Rubber Co., B. F., Akron, O.
- ♦ **Sphinx**—Diamond Rubber Co., Inc., Akron, O.
- ♦ **United States Rubber Co.**, Mechanical Goods Div., New York. Trade names—Granite, Shawmut, Pilot.
- ♦ **United & Globe Rubber Mfg. Co.**, Trenton, N. J.
- ♦ **XX, Polar**—Diamond Rubber Co., Inc., Akron, O.

#### HOSE, WATER.

(See "Hose, Rubber.")

#### HOUSINGS, METER.

Modern—Modern Iron Works, Quincy, Ill.

#### HOUSINGS, VALVE.

Clark, H. W., Co., Mattoon, Ill.

#### RUBS, SADDLE.

Bignall & Co., The, Medina, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Sanitary Company of America, Linfield, Pa.  
 Swett Iron Works, A. L., Medina, N. Y.

#### RUBS, VENT, SOIL PIPE.

Newbury Mfg. Co., Monroe, N. Y.

#### HUMIDIFIERS AND HUMIDISTATS.

American Moistening Co., Boston, Mass.  
 Atmospheric Conditioning Corp., Philadelphia, Pa.  
 Buddington—Geo. W. Diener Mfg. Co., Chicago, Ill.  
 Carrier Air Conditioning Co., Buffalo, N. Y.  
 Cramer System—Parks Cramer Co., Charlotte, N. C.  
 Erwin—Erwin & Co., Chicago, Ill.  
 Flobun—Brazil Stamping & Mfg. Co., Chicago, Ill.  
 Johnson Service Co., Milwaukee, Wis.  
 Kelly—Rhode Island Humidifier Co., Boston, Mass.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Logan, D. J.—Logansport Radiator Equipment Co., Logansport, Ind.  
 National Regulator Co., Chicago, Ill.  
 Nugent's—Thomas Nugent, New York (for heating furnaces).  
 Powers Regulator Co., Chicago, Ill.  
 Sterling—Blomfeldt & Rapp Co., Chicago, Ill.  
 Turbo-Humidifier—Parks-Cramer Co., Fitchburg, Mass.  
 Tillotson—Tillotson Humidifier Co., Providence, R. I.  
 Trico—Art Metal Radiator Cover Co., Chicago, Ill.

#### HUMIDITY CONTROL, AUTOMATIC.

American Moistening Co., Boston, Mass.  
 Carrier Air Conditioning Co., New York.

#### HYDRANTS, FIRE.

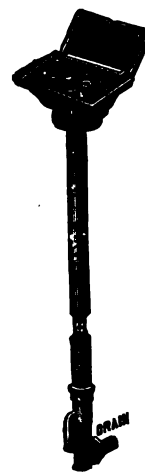
Allen Fire Department Supply Co., The, Providence, R. I.  
 American, Empire, National—American Foundry & Mfg. Co., St. Louis, Mo.  
 Beaumont Valve & Hydrant Works, Kankakee, Ill.  
 Bourbon—The Bourbon Copper & Brass Works, Cincinnati, O.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Clow, James B., & Sons Co., Chicago, Ill.  
 Coffin—Coffin Valve Co., Boston, Mass.  
 Columbian—Columbian Iron Works, Chattanooga, Tenn.  
 Corey—Rensselaer Valve Co., Troy, N. Y.  
 Corey Type—Iowa Valve Co., Oskaloosa, Iowa.  
 Darling Valve & Mfg. Co., The, Williamsport, Pa.  
 Dimmick Pipe Co., The, Birmingham, Ala.  
 Drummond & Co., M. J., New York, N. Y.  
 Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.  
 Eddy—Eddy Valve Co., Watford, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Fox & Co., John, New York, N. Y.  
 Garrett's—W. T. Garrett & Co., San Francisco, Cal.  
 Golyoke—Norwood Engineering Co., Florence, Mass.  
 Howard—Howard Iron Works, Buffalo, N. Y.  
 Iowa Mfg. Co., Oskaloosa, Ia.  
 Kennedy—The Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Matthews—R. D. Wood & Co., Philadelphia, Pa.  
 Vogel, Jos. A. Co., Wilmington, Del.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

Established 1857

# "Total Eclipse" Hydrant and Street Washer

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Hoffman & Billings Mfg. Co., Milwaukee, Wis.  
Kennedy—The Kennedy Valve Mfg. Co., Elmira,  
N. Y.

**HYDRANTS, FLUSH.**

American Foundry & Mfg. Co., St. Louis, Mo.

**HYDRANTS, FROST PROOF.**

Flower Valve Mfg. Co., Detroit, Mich.  
Vogel Patent—Vogel, Jos. A. Co., Wilmington, Del.

**HYDRANTS, GARAGE AND STABLE.**

Haydenville Co., The, Haydenville, Mass.  
Vogel Patent—Vogel, Jos. A. Co., Wilmington, Del.

**HYDRANT HEADS, PORTABLE.**

Vulcan—Ross Valve Mfg. Co., Troy, N. Y.  
Alaska, Murdock, T. E.—American Foundry & Mfg.  
Co., St. Louis, Mo.

**HYDRANTS, IRRIGATING.**

California—American Foundry & Mfg. Co., St. Louis,  
Haydenville Co., The, Haydenville, Mass.

**HYDRANTS, RAILROAD.**

Volkhardt Company, Inc., Stapleton, N. Y.

**HYDRANTS, SELF-CLOSING.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Eclipse, Total Eclipse—John C. Kupferle Foundry Co.,  
St. Louis, Mo.  
Haydenville Co., The, Haydenville, Mass.  
Lewis, Pat.—The Haydenville Co., Haydenville, Mass.  
Murdock—The Murdock Mfg. & Supply Co., Cincinnati,  
O. (railway coach cleaning).  
National, T. E.—American Foundry & Mfg. Co., St.  
Louis, Mo.  
Thomas Savill & Sons, Philadelphia, Pa.

**HYDRANTS, SPRINKLING.**

Alaska, McNamee—American Foundry & Mfg. Co.,  
St. Louis, Mo.  
Haydenville Co., The, Haydenville, Mass.  
Mueller, H. Mfg. Co., Decatur, Ill.  
T. E. Murdock—American Foundry & Mfg. Co., St.  
Louis, Mo.

**HYDRANTS, WALL.**

American—American Foundry & Mfg. Co., St. Louis,  
Mo.  
Eclipse, Government Type—John C. Kupferle Foundry  
Co., St. Louis, Mo.  
Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Peerless—Thos. Savill & Sons, Philadelphia, Pa.  
Star—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Western Mfg. Co., Oskaloosa, Iowa.  
XXth Century—Thomas Savill's Sons, Philadelphia.

**HYDRANTS, WATER CRANE.**

Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
National—American Foundry & Mfg. Co., St. Louis,  
Mo.

**HYDRANTS, WOOD POST.**

Challenge—American Foundry & Mfg. Co., St. Louis,  
Mo.  
Challenge—John C. Kupferle Foundry Co., St. Louis,  
Mo.

**HYDRANTS, YARD.**

Acme—N. O. Nelson Mfg. Co., St. Louis, Mo.  
Aermotor Co., Chicago, Ill.  
Alaska—American Foundry & Mfg. Co., St. Louis, Mo.  
Amazon—Reading Foundry & Supply Co., Reading, Pa.  
American—American Foundry & Mfg. Co., St. Louis,  
Mo.  
Barnes Mfg. Co., The, Mansfield, O.  
Buckeye—Mast, Foos & Co., Springfield, O.  
California—John C. Kupferle Foundry Co., St. Louis,  
Mo.  
Clark—H. W. Clark Co., Mattoon, Ill.  
Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
Clow—James B. Clow & Sons, Chicago, Ill.  
Crescent—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Darling Valve & Mfg. Co., The, Ltd., Williamsport, Pa.  
Douglas—W. & B. Douglas, Middletown, Conn.  
Eddy—Eddy Valve Co., Waterford, N. Y.  
Em Ess Murdock—The Meyer-Sniffen Co., New York.  
Enterprise—D. A. Hinman & Co., Sandwich, Ill.  
Fairbanks—The Fairbanks Co., New York, N. Y.  
Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.  
Hays Mfg. Co., Erie, Pa.  
Haydenville Co., The, Haydenville, Mass.  
Humphreys Mfg. Co., The, Mansfield, O.  
Ideal—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
Illinois Malleable Iron Co., Chicago, Ill.  
Iowa—Western Mfg. Co., Oskaloosa, Ia.

Kaiser's Patent—Rumsey & Co., Ltd., Seneca Falls, N. Y.  
**Kennedy—The Kennedy Valve Mfg. Co.**, Elmira, N. Y.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
**McNamara—American Foundry & Mfg. Co.**, St. Louis.  
 ♦ **McNamara Original—Hays Mfg. Co.**, Erie, Pa.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Mertens—Hays Mfg. Co., Erie, Pa.  
 Monarch Brass Co., The, Cleveland, O.  
 Murdock Original—Murdock Mfg. & Supply Co., Cincinnati, O.  
**Murdock Pattern—American Foundry & Mfg. Co.**, St. Louis.  
 Murdock Pat.—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
**Murdock, T. E.—American Foundry & Mfg. Co.**, St. Louis, Mo.  
**National—American Foundry & Mfg. Co.**, St. Louis.  
 Nelson Compression—N. O. Nelson Mfg. Co., St. Louis.  
 No-Shock—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Pratt & Cady Co., Hartford, Conn.  
 Sanitas Non-Freezing—Sanitas Mfg. Co., Boston, Mass.  
 Savill's Improved—Thos. Savill's Sons, Philadelphia, Pa.  
 Star—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Star—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Sun—The Goulds Mfg. Co., Seneca Falls, N. Y.  
**Total Eclipse—American Foundry & Mfg. Co.**, St. Louis, Mo.  
 Volkhardt—The Volkhardt Co., Inc., Stapleton, N. Y.  
 Wolff Mfg. Co., Chicago, Ill.

#### HYDRAULAGRAPHS.

American—American Steam Gage & Valve Mfg. Co., Boston, Mass.

#### HYDRO-EXTRACTORS.

Tolhurst Machine Works, Troy, N. Y.  
 Weston—American Tool & Machine Co., Boston, Mass.

#### HYDROMETERS.

Davis—Davis Instrument Mfg. Co., Inc., Baltimore, Md.  
 Freas, Frank L., Glass Works, Inc., Conshohocken, Pa.  
 Gensco—General Scientific Instrument Co., North Philadelphia, Pa.  
 Griebel Instrument Co., Carbondale, Pa.  
 Hays, Jos. W. Corp., Michigan City, Ind.  
 National Gauge Co., Brooklyn, N. Y.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Republic—Republic Flow Meters Co., Chicago, Ill.  
 Scientific Instrument Co., Detroit, Mich.  
 Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Tagliabue, G., Estate of, New York, N. Y.  
 Testo-Meter—A. E. Moeller, Brooklyn, N. Y.  
 Tycos—Taylor Instrument Companies, Rochester, N. Y.  
 Ustco Thermometer Co., Inc., New York, N. Y.  
 Weinhausen & Hespe, New York.  
 Weiss, A. A. & Son, Brooklyn, N. Y.

#### HYGROMETERS.

Autocrat—American Thermo-Ware Co., New York, N. Y.  
 Foxboro Co., Inc., The, Foxboro, Mass.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Tycos—Taylor Instrument Companies, Rochester, N. Y.  
 Weinhausen & Hespe, New York.

#### IDLERS, BELT.

(See also "Machinery, Power Transmission.")

American Tool & Machine Co., Boston, Mass.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Carlton Machine Co., Inc., Syracuse, N. Y.  
 Conveying Weigher Co., The, New York.  
 ♦ Dodge Mfg. Co., Mishawaka, Ind.  
 Dull, Raymond W., Co., Chicago, Ill.  
 ♦ **Hill Clutch Co.**, The, Cleveland, O.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Nordyke & Marmon Co., Indianapolis, Ind.

#### IGNITERS, DELAY, ELECTRIC.

♦ Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

#### IGNITERS, GAS LAMP AND STOVE.

American Lava Co., Chattanooga, Tenn.  
 B-H—Auto Igniter Co., New York, N. Y.  
 Oakman—Oakman Mfg. Co., New York, N. Y. (distance lit.)  
 Patrick, Carter & Wilkins Co., Philadelphia, Pa.  
 Pneu-Way—Pneumatic Gas Lighting Co., New York  
 Samson Electric Co., Canton, O.  
 Universal Adjustable—United States Standard Co., Voorheesville, N. Y. (for acetylene).

#### INCINERATORS, GARBAGE AND TOILET

(See "Burners or Incinerators")

#### INCLINOMETERS.

Statrett Co., L. S., Athol, Mass.

#### INCREASES, DRAINAGE.

♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.

#### INCREASES, GAS METER.

Mueller Mfg. Co., H., Decatur, Ill.

#### INDEXES, CHINA.

(See "Buttons, China.")

#### INDICATORS, ABSOLUTE PRESSURE

Uehling—Uehling Instrument Co., New York, N. Y.

#### INDICATORS, AMMONIA.

♦ American Thompson Improved—American Steam Gage & Valve Mfg. Co., Boston, Mass.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Tabor—The Ashcroft Mfg. Co., New York, N. Y.  
 Triumph—Trill Indicator Co., Corry, Pa.

#### INDICATORS AND INSTRUMENTS, COMBUSTION AND FLUE GAS.

Tagliabue, Chas. J., Mfg. Co., Brooklyn, N. Y.

#### INDICATORS, CO.

Bacharach Industrial Instrument Co., Pittsburgh, Pa.  
 Dwight—Dwight Mfg. Co., Chicago, Ill.

#### INDICATORS, CREOSOTE TANK.

Quimby Engineering Co., Philadelphia, Pa.

#### INDICATORS, DRAFT.

Uehling—Uehling Instrument Co., New York, N. Y.

#### INDICATORS, FLOW.

Phenix—The Richardson-Phenix Co., Milwaukee, Wis.

#### INDICATORS, FLUE ROLLING.

Helwig Mfg. Co., St. Paul, Minn.

#### INDICATORS, FUEL OIL.

Billow—National Supply Co., Chicago, Ill.  
 Lockett—A. M. Lockett & Co., Ltd., New Orleans, La.

#### INDICATORS, GAS ENGINE.

♦ American—American Steam Gage & Valve Mfg. Co., Boston, Mass.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Loomis—A. O. Loomis, Larimer, Pa.  
 ♦ **Powell Co.**, The Wm., Cincinnati, O.  
 Star Brass Mfg. Co., Boston, Mass.  
 Tabor—The Ashcroft Mfg. Co., New York, N. Y.  
 Triumph—Trill Indicator Co., Corry, Pa.

#### INDICATORS, GAS, FOR MINES.

Burrell—Mine Safety Appliance Co., Pittsburgh, Pa.

#### INDICATORS, HYDRAULIC.

♦ American, Thompson—American Steam Gage & Valve Mfg. Co., Boston, Mass.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Hydro-Cator—Sterling Gage Co., Detroit, Mich.

#### INDICATORS, LEAK.

Clark, H. W., Co., Mattoon, Ill.

#### INDICATORS, LOW WATER.

(See also "Alarms, Low Water.")

Boston Steam Specialty Co., Boston, Mass.  
 Eclipse—Illinois Engineering Co., Chicago, Ill.  
 U. S.—L. Steigert Co., Cincinnati, O.

#### INDICATORS, MEAN PRESSURE.

Shaw's—Quimby Engineering Co., Philadelphia, Pa.  
 Hydro—Bacharach Industrial Instrument Co., Pittsburgh, Pa.

#### INDICATORS, PIPE, ELECTRIC.

A. P. Smith Mfg. Co., East Orange, N. J.

#### INDICATORS, PYROMETER.

La Chatellier—Wilson-Macaulen Co., Inc., New York, N. Y.

#### INDICATORS, SAW TOOTH.

Champion—White, A. E., Machine Works, Eau Claire, Wis.

**INDICATORS, SMOKE.**

Eclipse—Boiler Room Improvement Co., Chicago, Ill.  
 Hamler—Eddy Smoke Recorder Co., The, Chicago, Ill.  
 Vulcan—Vulcan Fuel Economy Co., Chicago, Ill.

**INDICATORS, SPEED.**

- Bowsher, N. P., Co., South Bend, Ind.  
 Brown Instrument Co., Philadelphia, Pa.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ Diaston & Sons Co., Henry, Philadelphia, Pa.  
 ♦ Empire—Green, Tweed & Co., New York, N. Y.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Grant Mfg. & Machine Co., Bridgeport, Conn.  
 Industrial Instrument Co., Foxboro, Mass.  
 Lombard Governor Co., The, Ashland, Mass.  
 L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.  
 McDonnell Odometer Co., Chicago, Ill.  
 O-Z—O. Zernickow, New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Starrett Co., L. S., Athol, Mass.  
 Veeder Mfg. Co., Hartford, Conn.  
 ♦ Weiss—Greene, Tweed & Co., New York, N. Y.  
 Woodman, R., Mfg. & Supply Co., Boston, Mass.

**INDICATORS, STEAM ENGINE.**

- ♦ American—American Steam Gage & Valve Mfg. Co., Boston, Mass.  
 Batchelder—John S. Bushnell & Co., New York, N. Y.  
 Bushnell—John S. Bushnell & Co., New York, N. Y.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Hydro—Bacharach Industrial Instrument Co., Pittsburgh, Pa.  
 Jost's Sons, Edmund, Newark, N. J.  
 Lippincott—Lippincott, A. C., East Orange, N. J.  
 Outside Spring—Trill Indicator Co., Corry, Pa.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Robertson-Thompson—James L. Robertson & Sons, New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Tabor—The Ashcroft Mfg. Co., New York, N. Y.  
 Thompson—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Triumph—Trill Indicator Co., Corry, Pa.  
 Twentieth Century, Thompson—Richard Thompson & Co., New York, N. Y.

**INDICATORS, TANK.**

Baltimore Cooperage Co., Baltimore, Md.  
 Pneumercator Co., Inc., New York, N. Y.  
 Rockwell—Rockwell Furnace Co., New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Shaw's—Parks Engineering Co., Philadelphia, Pa.

**INDICATORS, TEST, LATEX.**

Brown Instrument Co., Philadelphia, Pa.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Cornell—F. Conley Co., The, Detroit, Mich.  
 Ideal—Johnson & Miller, New York, N. Y.  
 Koch, Henry & Son, Nyack, N. Y.  
 Norton Co., Worcester, Mass.  
 Robinson, C. E., Co., Orange, Mass.  
 Starrett Co., L. S., Athol, Mass.

**INJECTORS OR INSPIRATORS.**

- ♦ Automatic—Lunkenheimer Co., The, Cincinnati, O.  
 Baker—Chicago Pneumatic Tool Co., New York, N. Y.  
 Betton—J. M. Betton, New York, N. Y.  
 ♦ Buffalo Automatic and Sherwood Double Tube—Sherwood Mfg. Co., Buffalo, N. Y.  
 Bulkley Injector Co., New York, N. Y.  
 Champion—Jas. A. Griffiths & Son, Philadelphia, Pa.  
 Chicago—The Ohio Injector Co., Wadsworth, O.  
 Desmond—Desmond-Stephens Mfg. Co., Urbana, O.  
 Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Eclipse—Jas. A. Griffiths & Son, Philadelphia, Pa.  
 Edna Brass Mfg. Co., The, Cincinnati, Ohio.  
 Eureka—Kincaid Bros., Pittsburg, Pa.  
 Excelsior—N. A. Watson, Erie, Pa.  
 Eynon-Koerting—Eynon-Evans Mfg. Co., Philadelphia, Pa.  
 ♦ Garfield—The Ohio Injector Co., Wadsworth, O.  
 Garrett, W. D., & Co., New York.  
 Hancock—The Hancock Inspirator Co., New York.  
 Keystone—Jas. A. Griffiths & Son, Philadelphia, Pa.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 The Leader—The Randle Machinery Co., Cincinnati, O.  
 Little Giant—Rue Mfg. Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Metropolitan—Hayden & Derby Mfg. Co., New York.  
 Metropolitan—United Injector Co., New York.  
 Monitor, Nathan, New Nathan—Nathan Mfg. Co., New York, N. Y.  
 Niagara—Eynon-Evans Mfg. Co., Philadelphia, Pa.  
 ♦ Ohio—The Ohio Injector Co., Wadsworth, O.  
 ♦ Penberthy—Penberthy Injector Co., Detroit, Mich.  
 ♦ Powell Co., The Wm., Cincinnati, O.

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 Straight Line Regulator Co., Philadelphia, Pa.  
 ♦ Trix—American Injector Co., Detroit, Mich.  
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 ♦ U. S.—American Injector Co., Detroit, Mich.  
 Watson—N. A. Watson, Erie, Pa.  
 ♦ World—American Injector Co., Detroit, Mich.

**INJECTORS, BOILER COMPOUND.**

Dehn's—Compound Injector & Specialty Co., Chicago.

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- Edna Brass Mfg. Co., The, Cincinnati, O.  
 ♦ Garfield—The Ohio Injector Co., Wadsworth, O.  
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 Koerting—Schutte & Koerting Co., Philadelphia.  
 Monitor—The Edna Brass Mfg. Co., Cincinnati, O.  
 Nathan Mfg. Co., New York, N. Y.  
 Ohio—The Ohio Lubricator Co., Wadsworth, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**INKS, STENCIL AND MARKING.**

Bradley, A. J., Mfg. Co., New York, N. Y.  
 Matthews & Co., Jas. H., Pittsburgh, Pa.  
 Moss Henry & Co., Inc., New York, N. Y.  
 Pittsburgh Stamp Co., Inc., Pittsburgh, Pa.

**INLETS, CURB.**

Stuarts—Stuart Foundry Co., Detroit, Mich.

**INLETS, FRESH AIR.**

- Abendroth Bros., Port Chester, N. Y.  
 Advance—Zurn Mfg. Co., Erie, Pa.  
 Barber Mfg. Co., The, Ashtabula, O.  
 Desper, H. A., & Co., Worcester, Mass.  
 Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 Franklin Pipe & Foundry Co., Chicago, Ill.  
 H. & C. Hart & Cooley Co., Inc., New Britain, Conn.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Kank Klog—K. K. Mfg. Co., St. Louis, Mo.



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Reading Heater & Supply Co., Reading, Pa.  
Sanitary Company of America, Linfield, Pa.  
Swett Iron Works, A. L., Medina, N. Y.  
Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.

### INLETS, RAIN CONDUCTOR.

Sanitary—Sanitary Company of America, Linfield, Pa.

### INLETS, SEWER.

Acme—The Madison Avenue Foundry Co., Cleveland.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Clow, James B., & Sons, Chicago, Ill.  
Concord—Concord Foundry Co., Concord, N. H.  
Duplex—Duplex Mfg. Co., Elyria, O.  
Franklin Pipe & Foundry Co., Chicago, Ill.  
Hooker & Son, O. V., St. Johnsbury, Vt.  
Iowa—Iowa Foundry & Mfg. Co., Ft. Dodge, Iowa.  
Rudolph—Alfred J. Rudolph, Philadelphia, Pa.  
South Bend Foundry Co., South Bend, Ind.  
Star—McDonald Foundry, Columbus, O.  
Stuart Foundry Co., Detroit, Mich.  
Treaty Co., The, Greenville, Ohio.

### INSERTS (FOR CONCRETE).

Ackerman-Johnson Co., Chicago, Ill.  
Barrett Sales Co., The, Chicago, Ill.  
Chicago Expansion Bolt Co., Chicago, Ill.  
Dayton—Dayton Malleable Iron Co., Dayton, O.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
♦ Kill Clutch Co., The, Cleveland, O.  
Modern Mfg. Co., The, Cleveland, Ohio.  
Norjo Mfg. Co., St. Louis, Mo.  
Richmond—Richmond Screw Anchor Co., New York, N. Y.  
Sebec—Star Expansion Bolt Co., New York, N. Y.  
Truscon Steel Co., Youngstown, O.  
Wrialco—Wright & Alexander Co., Rochester, N. Y.

### INSPIRATORS.

(See "Injectors.")

**INSTRUMENTS, AIRPLANE AND AUTOMOBILE.**  
National Gauge & Equipment Co., LaCrosse, Wis.

### INSTRUMENTS, DRAUGHTSMEN'S AND ENGINEERS'.

Aloe Instrument Co., A. S., St. Louis, Mo.  
Dietzgen, Eugene C., Chicago, Ill.  
Gilson Slide Rule Co., Niles, Mich.  
Gurley, W. & L. E., Troy, N. Y. (Transits, Levels, Plane Tables, Alidades, Compasses, Rods, Chains, Sketching Cases, etc.)  
Keuffel & Esser Co., Hoboken, N. J.  
Kolesch & Co., New York, N. Y.  
Pease—Chicago, Pease-Franklin—The C. F. Pease Co., Chicago, Ill.  
Queen & Co., Philadelphia, Pa.  
Sterling—Warren-Knight Co., Philadelphia, Pa.  
White David Co., Inc., Milwaukee, Wis.

### INSTRUMENTS, DRAWING.

Weber, F. & Co., Philadelphia, Pa.

### INSTRUMENTS, HARDNESS TESTING.

Advance Felt Specialty & Cutting Co., Chicago, Ill.  
Scleroscope—Shore Instrument & Mfg. Co., Jamaica, New York.

### INSTRUMENTS, MEASURING AND TESTING.

♦ Norma—Norma Co. of America, New York, N. Y.  
Queen-Gray Co., Philadelphia, Pa.  
Starrett, L. S., Co., Athol, Mass.

### INSTRUMENTS, OIL TESTING.

Tag, Saybolt—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.

### INSTRUMENTS, RADII AVERAGING.

Bristol-Durand—The Bristol Co., Waterbury, Conn.  
Foxboro, Durand—Industrial Instrument Co., Foxboro, Mass.

### INSULATING MATERIAL, ELECTRIC.

American Vulcanized Fibre Co., Wilmington, Del.  
Continental Fibre Co., Newark, N. J.  
Crescent—Crescent Burner Mfg. Co., New York, N. Y.  
Crocker National Fire Prevention Eng. Co., New York.  
♦ Diamond State Fibre Co., Bridgeport, Pa.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
Fibre Conduit Co., The, Orangeburg, N. Y.  
Hewitt, C. B., & Bros., Inc., New York, N. Y.  
Hydrex Asphalt Products Corp., New York, N. Y.  
Johns-Pratt Co., Hartford, Conn.  
Keystone—Johns-Manville, Inc., New York, N. Y.  
Lava—American Lava Co., Chattanooga, Tenn.  
Lava—Colonial Mfg. Co., Chattanooga, Tenn.  
Leatheroid—Rogers Fibre Co., Boston, Mass.  
Mica Mfg. Co., The, New York, N. Y.  
Neponset—F. W. Bird & Son, East Walpole, Mass.  
Nonpareil Brick—Armstrong Cork & Insulating Co., Pittsburgh, Pa.  
Steward, D. M., Mfg. Co., Chattanooga, Tenn.  
Stowell Fireproofing Co., Ogden, Mich.  
Therminofelt—Guyasuta Mfg. Co., Sharpsburg, Pa.

### INSULATING MATERIAL, SOUND AND HEAT PROOF.

(For "Pipe Covering," see "Covering, Pipe and Boiler.")

Hewitt, C. B., & Bros., Inc., New York, N. Y.  
♦ J. M.—Johns-Manville, Inc., New York.  
Linofelt—Union Fibre Co., Inc., Winona, Minn.  
Nonpareil Cork Board—Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
Sil-O-Cel—Celite Products Co., Chicago, Ill.  
Trainer, C. W., Mfg. Co., Boston, Mass.  
Waterproof Lith—Union Fibre Co., Inc., Winona, Minn.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

### INSULATORS.

Alco—American Lava Co., Chattanooga, Tenn.  
Kirchberger, M., & Co., Inc., New York, N. Y.

### INTENSIFIERS, STEAM, HYDRAULIC.

Chambersburg Engineering Co., Chambersburg, Pa.  
Morgan Engineering Co., Alliance, Ohio.

### INTERCOOLERS.

Chicago Pneumatic Tool Co., New York.

### IRON, CHAIN MAKING.

Bethlehem Steel Co., Bethlehem, Pa.

### IRON, FIG.

Addy, Matthew & Co., Cincinnati, O.  
Baird & West, Detroit, Mich.  
♦ Bethlehem Steel Co., Bethlehem, Pa.  
Bourne-Fuller Co., Cleveland, O.  
Carnegie Steel Co., Pittsburgh, Pa.  
Columbus Iron & Steel Co., Columbus, O.  
Corrigan, McKinney & Co., Cleveland, O.  
Debevoise-Anderson Co., New York City.  
Delaware Steel Co., New York.  
Eaton, Rhodes & Co., Cincinnati, O.  
Federal Tool & Alloy Steel Corp., Brooklyn, N. Y.  
Globe Iron Co., Jackson, O.  
Hanna & Co., M. A., Cleveland, O.  
Hillman & Son, J. H., Pittsburgh, Pa.  
Hyman-Michaels Co., The, Chicago, Ill.  
Illinois Steel Co., Chicago, Ill.  
♦ LaBelle Iron Works, Steubenville, O.  
Lackawanna Steel Co., Lackawanna, N. Y.  
Lea & Co., J. Tatnall, Philadelphia, Pa.  
McKeefrey & Co., Leontia, O.  
Mitchell-Diggins Iron Co., Cadillac, Mich.  
Mohr, J. J., & Son, Philadelphia, Pa.  
Perry Iron Co., Erie, Pa.  
Pickands, Brown & Co., Chicago, Ill.  
Pickands, Mather & Co., Cleveland, O.  
Reading Iron Co., Reading, Pa.  
♦ Republic Iron & Steel Co., Youngstown, O.



Rogers, Brown & Co., Cincinnati, O.  
 Samuel, Frank, Philadelphia, Pa.  
 Snyder Co., W. P., Pittsburg, Pa.  
 Stewart Iron Co., Ltd., Cleveland, O.  
 Superior Charcoal Iron Co., Grand Rapids, Mich.  
 Swede—Alan Wood Iron and Steel Co., Philadelphia, Pa.  
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.  
 Thomas Furnace Co., Milwaukee, Wis.  
 ♦ Upson Nut Co., Cleveland, O.  
 Walter, Wallingford & Co., Cincinnati, O.  
 Wheeling Steel Corp., Wheeling, W. Ya.

**IRON, PLANISHED SHEET.**

- ♦ W. Deevens Wood Co.'s—American Sheet & Tin Plate Co., Pittsburg, Pa.  
 Ward-Dickey Steel Co., Indiana Harbor, Ind.

**IRONS, STAKE.**

Sayre, L. A., Company, Newark, N. J.

**IRON AND STEEL, SHEET.**

- Allegheny Steel Co., Pittsburg, Pa.  
 American Rolling Mill Co., Middletown, O.  
 ♦ American Sheet & Tin Plate Co., Pittsburg, Pa.  
 American Tube & Stamping Co., Bridgeport, Conn.  
 Atlanta Tin Plate & Sheet Mill Co., Atlanta, Ind.  
 Bourne-Fuller Co., Cleveland, O.  
 Buffalo Steel Co., Tonawanda, N. Y.  
 Bruce & Cook, New York, N. Y.  
 Carnahan Tin Plate & Sheet Co., Canton, O.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Empire Iron & Steel Co., Niles, O.  
 Follansbee Bros. Co., Pittsburg, Pa.  
 Goff, Horner & Co., Ltd., Pittsburg, Pa.  
 Hagar, W. G., Iron Co., St. Louis, Mo.  
 Illinois Steel Co., Chicago, Ill.  
 Inland Steel Co., Chicago, Ill.  
 Kratzer, W. N., & Co., Pittsburg, Pa.  
 ♦ La Belle Iron Works, Steubenville, O.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Phillips Sheet & Tin Plate Co., Weirton, W. Va.  
 Pittsburg Metal Products Co., Pittsburg, Pa.  
 Portsmouth Steel Co., Portsmouth, O.  
 Republic Iron & Steel Co., Youngstown, O.  
 Seneca Iron & Steel Co., Buffalo, N. Y.  
 Stark Rolling Mill Co., Canton, O.  
 Taylor, N. & C., Philadelphia, Pa.  
 Thomas Steel Co., Niles, O.  
 United Steel Co., Canton, O.  
 West Penn Steel Co., Brackenridge, Pa.  
 Wood, Alan, Iron & Steel Co., Philadelphia, Pa.  
 Worth Bros. Co., Coatesville, Pa.  
 ♦ Wyoming Shovel Works, Wyoming, Pa.  
 ♦ Youngstown Sheet & Tube Co., Youngstown, O.

**IRON, STAYBOLT.**

- ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Falls Hollow Staybolt Co., Cuyahoga Falls, O.

**IRONS, BRANDING.**

Ever-Hot—Everhot Manufacturing Co., Maywood, Ill.

**IRONS, MEASURING & SLOTTED ANGLE.**

Simplex Tool Co., Woonsocket, R. I.

**IRONS, PLUMBERS' BENDING AND YARNING.**

American Saw & Tool Works, Chicago, Ill.  
 Anderson, W. H., Tool & Supply Co., Detroit, Mich.  
 Bernz Co., Otto, Newark, N. J.  
 Marcy Tool Works, Putnam, Conn.  
 Johnson, Wm., Newark, N. J.  
 Klein-Logan Co., Pittsburg, Pa.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 National Tool Co., New York, N. Y.  
 Stanley Rule & Level Works, Atha Dept., New Britain, Conn.  
 W. C. Carver—Carver Tool Works, Spring Valley, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.

**IRONS, SOLDERING.**

(See "Coppers, Soldering.")

**IRONS, TUBES.**

- American Scale Co., Kansas City, Mo.  
 Buffalo Forge Co., Buffalo, N. Y.  
 ♦ Champion Blower & Forge Co., Lancaster, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Norton, Warren—South Bend Foundry Co., South Bend, Ind.  
 Southern Skein & Foundry Co., Chattanooga, Tenn.  
 Sutton—Indiana Foundry Co., Indiana, Pa.

**JACKETS, FOUNDRY.**

Buch Foundry Equipment Co., York, Pa.

**JACKETS, ROSE REPAIR.**

Allen Patent—The Allen Fire Department Supply Co., Providence, R. I.  
 Cooper—Callahan Co., The Corneliuss, Boston, Mass.

**JACKETS, SNAP MOLD.**

Woods, T. B. Sons Co., Chambersburg, Pa.

**JACKETS, WATER.**

Adams—The Adams Co., Dubuque, Ia.  
 Columbiana Boiler Co., Columbiana, O.  
 Dover Boiler Works, New York.  
 Kennicott Co., Chicago Heights, Ill.  
 Manitowoc Engineering Co., Manitowoc, Wis.

**JACKS, AUTOMOBILE.**

- Burns—Alsteel Mfg. Co., Battle Creek, Mich.  
 Atlas—Atlas Mfg. Co., Orlando, Fla.  
 ♦ Barrett—The Duff Mfg. Co., Pittsburgh, Pa.  
 Buckeye Jack Mfg. Co., The Alliance, O.  
 E & S—Ellis-Smith Mfg. Co., Inc., Buffalo, N. Y. (towing truck).  
 Elite Mfg. Co., Ashland, Ohio.  
 Excel—Randall-Faichney Co., Inc., Boston, Mass.  
 Giant—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Joyce-Cridland Co., The, Dayton, O.  
 Lane—Lane Brothers Co., Poughkeepsie, N. Y.  
 Leader—National Standard Co., Niles, Mich.  
 Manco—Mann Corporation, Kankakee, Ill.  
 Millers Falls Co., Millers Falls, Mass.  
 Peerless, Oliver, Samson—Oliver-Barth Jack Co., Milwaukee, Wis.  
 Pup—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Rees—Iron City Products Co., Pittsburgh, Pa.  
 Simplex—Templeton, Kenly & Co., Ltd., Chicago, Ill.  
 Springfield—Shawyer Co., Springfield, Ohio.  
 Standard—National Standard Co., Niles, Mich.  
 Templeton, Kenly & Co., Ltd., Chicago, Ill.  
 Walker's Badger, Jump-Jack, Roll-A-Car—Walker Mfg. Co., Racine, Wis.

**JACKS, BARREL HOISTING, AND STAND.**

Daugherty—The Daugherty Mfg. Co., Inc., Kittanning, Pa.

**JACKS, CAR REPLACING.**

- Buckeye Jack Mfg. Co., The Alliance, O.  
 ♦ Duff-Barrett—The Duff Mfg. Co., Pittsburgh, Pa.  
 Mosher—De Weese, F. M., Co., Chillicothe, O.  
 Pearson—Pearson Jack Co., Boston, Mass.

**JACKS, ENGINE.**

- Badger—Wisconsin Engine Co., Corliss, Wis.  
 ♦ Duff Mfg. Co., Pittsburgh, Pa.  
 I. I. & B. Co., Vulcan—Illinois Iron & Bolt Co., Carpentersville, Ill.

**JACKS, FLOOR.**

Neville—Neville Mfg. Co., Kewanee, Ill.

**JACKS, GAGE HAND.**

Ashcroft—Ashcroft Mfg. Co., New York, N. Y.

**JACKS, HYDRAULIC.**

- Bethlehem Foundry & Machine Co., S. Bethlehem, Pa.  
 ♦ Bethlehem Steel Co., South Bethlehem, Pa.  
 Dienelt & Eisenhardt, Inc., Philadelphia, Pa.  
 Dudgeon, Richard, New York, N. Y.  
 Elmes Engineering Works, Chas. F., Chicago, Ill.  
 Fuller & Johnson, Madison, Wis.  
 Joyce-Cridland Co., The, Dayton, O.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Pratt—Wm. E. Pratt Mfg. Co., Chicago, Ill. (auto).  
 Reliance—Phillip S. Justice & Co., Philadelphia, Pa.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Watson-Stillman Co., The, Aldene, N. J.

**JACKS, LIFTING**

- Acme—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Bray Mfg. Co., New York, N. Y.  
 Buckeye—The Buckeye Jack Mfg. Co., Alliance, O.  
 Buda Postop—The Buda Co., Chicago, Ill.  
 ♦ Buffum Tool Co., Louisiana, Mo. (wagon).  
 Canton Foundry & Machine Co., Canton, O.  
 Chicago—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 ♦ Duff-Barrett—The Duff Mfg. Co., Pittsburgh, Pa.  
 Ellis-Smith Mfg. Co., Inc., Buffalo, N. Y.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Joyce-Cridland Co., The, Dayton, O.  
 Klemm, E. R., Chicago, Ill.  
 Liberty—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Little Giant—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Millers Falls Co., New York.  
 Miller (wood) Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Morgan Mfg. Co., Inc., Keene, N. H.  
 Oliver-Barth Jack Co., Milwaukee, Wis. Trade names—Improved Samson, Oliver, Omco, Peerless, Practical, New Samson, Samson.

Moore—Walker-Moore Mfg. Co., Racine, Wis.  
 Mosher—DeWeese Co., F. M., Chillicothe, O.  
 Morrison—The Woods Engineering Co., Alliance, O.  
 Norton, A. O., Inc., Boston, Mass.  
 Omco—Oliver Mfg. Co., Chicago, Ill.  
 Peerless Lifter—Peerless Tool Co., Chicago, Ill.  
 Pratt—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Rees—Iron City Products Co., Pittsburgh, Pa.  
 Reliable—Elite Mfg. Co., Ashland, O.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Sampson—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Simplex Emergency—Templeton, Kenly & Co., Ltd., Chicago, Ill.  
 Topping—Topping Bros., New York, N. Y.

#### JACKS, LOG.

♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Joyce-Cridland Co., The, Dayton, O.  
 Link-Belt Company, Chicago and Philadelphia  
 Templeton-Kenly & Co., Ltd., Chicago, Ill.

#### JACKS, MINING.

♦ Duff—Duff Mfg. Co., Pittsburgh, Pa.  
 Joyce-Cridland Co., Dayton, O.  
 Templeton, Kenly & Co., Ltd., Chicago, Ill.

#### JACKS, OIL WELL.

♦ Barrett—The Duff Mfg. Co., N. S., Pittsburgh, Pa.  
 Oklahoma Iron Works, Tulsa, Okla.  
 Templeton, Kenly & Co., Ltd., Chicago, Ill.

#### JACKS, PIT.

Vreeland—The Watson-Stillman Co., Aldene, N. J.

#### JACKS, PLANNER.

Armstrong Bros. Tool Co., Chicago, Ill.  
 ♦ Champion—Western Tool & Mfg. Co., Springfield, O.

#### JACKS, PNEUMATIC.

Chicago Pneumatic Tool Co., New York, N. Y.  
 Ingersoll-Rand Co., New York, N. Y.  
 Quincy-Manchester-Sargent Co., Plainfield, N. J.

#### JACKS, PULLING AND PUSHING.

Dudgeon, Richard, New York  
 Duff Co., Pittsburgh, Pa.  
 Joyce-Cridland Co., Dayton, O.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Pearson Jack Co., Boston, Mass.  
 Simplex—Templeton, Kenly & Co., Ltd., Chicago, Ill.  
 Watson-Stillman Co., The, Aldene, N. J.

#### JACKS, PUMP.

American-Blakeslee Mfg. Co., Birmingham, Ala.  
 Appleton Mfg. Co., Batavia, Ill.  
 Butler—Butler Co., The, Butler, Ind.  
 Davis-Hansen Pump Co., Oshkosh, Wis.  
 Dempster Mill Mfg. Co., Beatrice, Neb.  
 Duplex—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Emerson-Brantingham Co., Rockford, Ill.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Goulds—Gould Mfg. Co., The, Seneca Falls, N. Y.  
 Handy—Fairbanks, Morse & Co., Chicago, Ill.  
 Hayes—Hayes Pump & Planter Co., Galva, Ill.  
 Heller-Aller Co., The, Napoleon, O.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ideal—Fairbanks, Morse & Co., Chicago, Ill.  
 J. & H.—The S. M. Jones Co., Toledo, O.  
 Kerrhard Co., Red Oak, Ia.  
 Lone Star—Axtell Co., Ft. Worth, Tex.  
 McEwen Mfg. Company, Tulsa, Okla.  
 Midwest Engine Co., Indianapolis, Ind.  
 Monitor—Baker Mfg. Co., Evansville, Ind.  
 Myers, F. E., & Bros., Ashland, O.  
 Nelson Bros. Co., Saginaw, Mich.  
 Norris, W. C., Tulsa, Okla.  
 Oklahoma Tool & Supply Co., Tulsa, Okla.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Iowa.  
 Reliance—American Scale Co., Kansas City, Mo.  
 Rucker—Folo Machine Co., Folo, Ill.  
 Samsco—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Spang—Spang & Co., Butler, Pa. (For oil wells.)  
 Star Pointer Pump Mfg. Co., Menasha, Wis.  
 Stover Manufacturing & Engine Co., Freeport, Ill.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Thompson—J. Thompson & Son Mfg. Co., Beloit, Miss.  
 Trehern Pump Co.—Dive Geo. D. Roper Corp., Rockford, Ill.  
 Turner Mfg. Co., Port Washington, Wis.  
 United Engine Co., Lansing, Michigan.  
 Warlo-Ward-Love Pump Corp., Rockford, Ill.

#### JACKS, RAILROAD.

♦ Barrett—The Duff Mfg. Co., Pittsburgh, Pa.  
 Buckeye Jack Mfg. Co., The, Alliance, O.  
 Buda—The Buda Co., Chicago, Ill.  
 Joyce-Cridland Co., Dayton, O.

Justice, Philip S., Co., Philadelphia, Pa.  
 Kalamazoo Railroad Supply Co., Kalamazoo, Mich.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Mosher—F. M. De Weese Co., Chillicothe, O.  
 Norton—Norton, A. O., Inc., Boston, Mass.  
 Rees—Iron City Products Co., Pittsburgh, Pa.  
 Simplex—Templeton, Kenly & Co., Ltd., Chicago, Ill.  
 Standard—National Standard Co., Niles, Mich.  
 Verona—Verona Tool Works, Pittsburgh, Pa.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Watson-Stillman Co., New York.

#### JACKS, SMOKE, ROUNDHOUSE.

Dickinson, Paul, Inc., Chicago, Ill.  
 Franklin Mfg. Co., Franklin, Pa.  
 ♦ J. M.—Johns-Manville, Inc., New York.  
 Kernchen Co., Chicago, Ill.

#### JACKS, STONEYARD AND QUARRY.

Klemm, E. R., Chicago, Ill.  
 Joyce-Cridland Co., Dayton, O.  
 O'Leary, Arthur J., Son Co., Chicago, Ill.

#### JACKS, TELESCOPIC.

♦ Duff Mfg. Co., Pittsburgh, Pa.  
 ♦ Lovejoy Tool Works, Chicago, Ill.

#### JACKS, TRAVERSING.

Joyce-Cridland Co., Dayton, O.  
 Topping Bros., New York, N. Y.

#### JACKS, TUNNELING BARREL.

National Malleable Casting Co., Cleveland, O.

#### JACKS, TURNTABLE.

Ellis-Smith Mfg. Co., Inc., Buffalo, N. Y.

#### JACKSCREWS.

Barrett—The Duff Mfg. Co., Pittsburgh, Pa.  
 Belleville Stove & Range Co., Belleville, Ill.  
 Blue Ball Machine Works, Blue Ball, Pa.  
 Bray Mfg. Co., New York, N. Y.  
 Dalsey—Blue Ball Machine Works, Blue Ball, Pa.  
 Doughboy, Atlas—McKiernan-Terry Drill Co., New York.  
 Duff—Duff Mfg. Co., Pittsburgh, Pa.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Hoyt—Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Jiffy—Paul W. Koch & Co., Chicago, Ill.  
 Joyce-Cridland Co., The, Dayton, O.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Le Count—Lecount, W. G., Tool Works, South Norwalk, Conn.  
 Millers Falls Co., New York, N. Y.  
 Peerless—New London Vise Works, New London, Conn.  
 Pratt, Wm. E., Mfg. Co., Chicago, Ill.  
 ♦ Barrett Co., The E. B., Athol, Mass.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Sweet Iron Works, A. L., Medina, N. Y.  
 Telescopic—Lovejoy Tool Works, Chicago, Ill.  
 Vulcan—Southern Skein & Foundry Co., Chattanooga, Tenn.  
 Watson-Stillman Co., New York.

#### JAWS, BORING MILL.

♦ Cushman Chuck Co., The, Hartford, Conn.  
 Horton, E., & Sons Co., Inc., Windsor Locks, Conn.

#### JAWS, FACE PLATE.

Bullard Machine Tool Co., The, Bridgeport, Conn.  
 ♦ Cushman Chuck Co., Hartford, Conn.  
 Hoggson & Pettis Mfg. Co., The, New Haven, Conn.  
 Horton & Sons Co., Inc., The E., Windsor Locks, Conn. (iron and steel).  
 ♦ Skinner Chuck Co., The, New Britain, Conn.  
 Sweetland—The Hoggson & Pettis Mfg. Co., New Haven, Conn.  
 ♦ Union Mfg. Co., New Britain, Conn.

#### JAWS, PIPE, FOR MONKEY WRENCH.

Armstrong Mfg. Co., The, Bridgeport, Conn.  
 ♦ Billings & Spencer Co., The, Hartford, Conn.

#### JAWS, PIPE, FOR VISES.

Armstrong Mfg. Co., Bridgeport, Conn.  
 Bon Mfg. Co., Elgin, Ill.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 ♦ Sherman Mfg. Co., E. B., Battle Creek, Mich.  
 Vichek Tool Co., The, Cleveland, O.  
 ♦ Vulcan—J. H. Williams & Co., Brooklyn, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### JAWS, VISE (GRIPS ANY SHAPE).

Universal Equalizer Co., The, Cincinnati, O.

**JIGS, DIES, TOOLS AND FIXTURES.**

Advance Tool Co., Cincinnati, Ohio.  
 Ainslie Machine & Tool Works, Hartford, Conn.  
 American Pneumatic Chuck Co., Chicago, Ill.  
 Essex Tool Works, Newark, N. J.  
 Fallon Machinery Co., Lynn, Mass.  
 Gardam, Wm., & Son, Inc., New York, N. Y.  
 Gem City Machine Co., Dayton, Ohio.  
 Gisholt Machine Co., Madison, Wis.  
 Goddard Tool Co., Chicago, Ill.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 Harris Engineering Co., Bridgeport, Conn.  
 Hartford—Hartford Special Machinery Co., Hartford, Conn.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Holmes Mfg. Co., Shelton, Conn.  
 Knapp, Arthur, Engineering Corp., New York, N. Y.  
 Krasberg Mfg. Co., Chicago, Ill.  
 L. & L. Manufacturing Co., Inc., Newark, N. J.  
 Lansing Stamp Co., Lansing, Mich.  
 Marvin & Casler Co., Canastota, N. Y.  
 Mehl Machine Tool & Die Co., Roselle, N. J.  
 National Engineering & Tool Works, Oak Park, Ill.  
 Nelson Tool Company, Inc., New York, N. Y.  
 Redin, Ekstrom & Co., Rockford, Ill.  
 Richmond Metal Products Co., Inc., Richmond, Va.  
 Robbins, Gamwell & Co., Pittsfield, Mass.  
 Sall, H. G., Co., Chicago, Ill.  
 Sallow Machine Tool Co., Pawtucket, R. I.  
 Simplex Tool Co., Woonsocket, R. I.  
 Springfield Tool Co., Springfield, Mass.  
 Stevens Mfg. Co., Dayton, O.  
 Taylor Shantz Co., Rochester, N. Y.  
 Up-to-Date Tool Co., Boston, Mass.

**JIGS, DRILL.**

Hill, M. B., Mfg. Co., Worcester, Mass.  
 National Sales Engineering Co., Detroit, Mich.

**JIGS, FOR GRINDING SWAGE ANVILS.**

Davis—Hinckley Machine Works, Hinckley, Ill.  
 ♦ Stanley—Stanley Rule & Level Co., New Britain, Conn.

**JIGS, MINING.**

Davis Foundry & Machine Works, Rome, Ga.  
 Link-Belt Company, Chicago and Philadelphia.  
 McLanahan Stone Machine Co., Hollidaysburg, Pa.  
 Power & Mining Machinery Co., New York.  
 Scranton Acetylene Lamp Co., Scranton, Pa.  
 Simplex—Wilmot Engineering Co., Hazleton, Pa.  
 Sloan & Chase Mfg. Co., Newark, N. J.

**JIGS, PLUNGER.**

Vigilant—Wilmot Engineering Co., Hazleton, Pa.

**JOGGERS, PLATE AND FRAME.**

Hilles & Jones Co., Wilmington, Del.

**JOINTERS, MASON'S BRICK.**

Johnson, Wm., Newark, N. J.

**JOINTERS, WOODWORKING.**

(See also "Machinery, Woodworking.")

American Saw Mill Machinery Co., Hackettstown, N. J.  
 Chase Turbine Mfg. Co., Orange, Mass.  
 ♦ Crescent—Crescent Machine Co., Leontonia, O.  
 Globe Inventing Co., Chicago, Ill.  
 Jenkins Machine Co., Sheboygan, Wis.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 ♦ Sidney Machine Tool Co., Sidney, O.  
 Silver—The Silver Mfg. Co., Salem, O.  
 Towaley—John T. Towaley Mfg. Co., Cincinnati, O.  
 Trojan—Troy File Works, Troy, N. Y. (Saw.)  
 Wallace—J. D. Wallace & Co., Chicago, Ill.  
 Yates, P. B., Machine Co., Beloit, Wis.

**JOINTS, BALL AND SOCKET.**

Morgan Mfg. Co., Inc., Keene, N. H.

**JOINTS, FLUE ROD.**

Butman—M. B. Skinner Co., Chicago, Ill.

**JOINTS, PIPE, ANGLE.**

American District Steam Co., North Tonawanda, N. Y.  
 Central Station Steam Co., Detroit, Mich.  
 Connor, M. A., Lockport, N. Y.

**JOINTS, PIPE, BALL.**

Clow, James B., & Sons, Chicago, Ill.  
 Curtinless Shower Co., New York.  
 Exeter Brass Works, Exeter, N. H.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Lancaster Iron Works, Inc., Lancaster, Pa.

**JOINTS, PIPE, EXPANSION.**

Alberger Heater Co., Buffalo, N. Y.  
 American District Steam Co., North Tonawanda, N. Y.  
 Badger & Sons Co., E. B., Boston, Mass.  
 Badger—Badger Fire Extinguisher Co., Boston, Mass.  
 Belfield Co., H., Philadelphia, Pa.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Camden Copper Works, Inc., Camden, N. J.  
 Central Station Steam Co., Detroit, Mich.  
 Coldwell-Wilcox Co., Newburgh, N. Y.  
 Dahlquist Mfg. Co., Boston, Mass. (Copper.)  
 Elastite—The Philip Carey Mfg. Co., Cincinnati, O.  
 Farnsworth—Farnsworth Co., Conshohocken, Pa.  
 Gerstein Bros. & Cooper, South Boston, Mass. (copper).  
 Griscorn Russell Co., New York, N. Y.  
 Harris, Arthur, Co., Chicago, Ill.  
 Hoffmann Mfg. Co., B., Milwaukee, Wis.  
 Holmes, A. L., Grand Rapids, Mich.  
 Hornung, J. C., Chicago, Ill.  
 Howard—Howard Iron Works, Buffalo, N. Y.  
 Hydrex—Hydrex Felt & Engineering Co., New York, N. Y.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Kaltenthaler, H. J., Philadelphia.  
 Kellogg, M. W., Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Konold, M. J., Pittsburgh, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., Detroit, Mich.  
 Minnesota Tank Co., Minneapolis, Minn.  
 Nelson Valve Co., Philadelphia, Pa.  
 Nuttall, R. D., Co., Pittsburgh, Pa.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve Fdy. & Const. Co., Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Ross Crosshead-Guided—Ross Heater & Mfg. Co., Buffalo, N. Y.  
 Shaw, Benjamin F. Co., Wilmington, Del.  
 Standard Spiral Pipe Wks., Chicago, Ill.  
 Tyler Underground Heating System (Guided), Pittsburgh, Pa.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Wainwright—Alberger Pump & Condenser Cos., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Webster—Warren Webster & Co., Camden, N. J.  
 Wessinger Co., The, Duluth, Minn.  
 White—The International Coupler Co., Pittsburgh, Pa.

**JOINTS, PIPE, FLANGED.**

American Foundry & Construction Co., Pittsburgh, Pa.  
 Cornell & Underhill, New York, N. Y. (welded).  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kellogg, W. K., & Co., New York, N. Y.  
 Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
 Simmons Pipe Bending Works, Newark, N. J.  
 Van Stone—Ballwood Co., Passaic, N. J.  
 Van Stone—Best Mfg. Co., Pittsburgh, Pa.  
 Van Stone—Cornell & Underhill, New York, N. Y.  
 Van Stone—John Simmons Co., New York, N. Y.  
 Van Stone—Lumsden & Van Stone Co., Boston.  
 Van Stone—Murray W. Sales Co., Detroit, Mich.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Whitlock Coil Pipe Co., Hartford, Conn.

**JOINTS, PIPE, FLEXIBLE, BALL AND SWIVEL.**

American District Steam Co., North Tonawanda, N. Y.  
 Barco—Barco Mfg. Co., Chicago, Ill.  
 Coldwell-Wilcox Co., Newburgh, N. Y.  
 Cornell & Underhill, New York, N. Y.  
 C. C.—Crane Co., Chicago, Ill.  
 Dexter, I. H., Co., Inc., New York, N. Y.  
 Draper—The Draper Mfg. Co., Port Huron, Mich.  
 Edna Brass Mfg. Co., The, Cincinnati, O.  
 Flex-OKant—The Durbin Co., East St. Louis, Ill.  
 Greenlaw Mfg. Co., Boston, Mass.  
 ♦ Kelley & Jones Co., The, Greensburg, Pa.  
 Martin—Barco Mfg. Co., Chicago, Ill.  
 Mechanical Devices Co., Watervliet, N. Y.  
 ♦ Moran—Moran Flexible Steam Joint Co., Louisville, Ky.  
 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Speakman Company, Wilmington, Del.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Standard Spiral Pipe Works, Chicago, Ill.  
 ♦ Thermoid—Thermoid Rubber Co., Trenton, N. J.  
 Universal Valve Co., Burlington, Wis.  
 Walker—Walker Mfg. Co., Fenton, Mich.  
 Walters—Mechanical Devices Co., Watervliet, N. Y.  
 White Auto-Tite Universal—The International Coupler Co., Pittsburgh, Pa.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
 Wood & Co., R. D., Philadelphia, Pa.

**JOINTS, PIPE, SWING.**

- Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Crane—Crane Co., Chicago, Ill.  
 Durbin Co., The, St. Louis, Mo.  
 Farnsworth—Farnsworth Co., Conshohocken, Pa.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffmann Mfg. Co., B., Milwaukee, Wis.  
 ♦ Kelley & Jones Co., The, Greensburg, Pa.  
 Keystone Brass Works, Inc., Erie, Pa.  
 Knudsen Packless—Universal Valve Co., Chicago.  
 Lunkenheimer Co., The, Cincinnati, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Tuxedo—Frank Williams, Inc., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**JOINTS, SLIP, PIPE AND TUBING.**

- American Brass Mfg. Co., The, Cleveland, O.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Elgin Brass Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Federal-Huber Co., Chicago, Ill.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 Kent—F. C. Kent Co., Irvington, N. J.  
 Lippold Valve Co., The, Erie, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 Monarch Brass Co., The, Cleveland, O.  
 Morrison Bros., Dubuque, Iowa.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Wolverine Brass Works, Grand Rapids, Mich.

**JOINTS, SOIL PIPE, INSERTIBLE.**

- Birmingham—Birmingham Pipe & Castings Co., Birmingham, Ala.  
 Bellows—Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Kafer—Reading Foundry & Supply Co., Reading, Pa.  
 Sanitary Company of America, Linfield, Pa.  
 Simplex—Simplex Joint Mfg. Co., Newark, N. J.  
 Sisson—R. Estabrook's Sons, South Boston, Mass.

**JOINTS, STRAP.**

- Leard, Wm., Co., New Brighton, Pa.

**JOINTS, UNIVERSAL, FOR MACHINERY.**

- Arvac—Arvac Mfg. Co., Anderson, Ind.  
 Bausch Machine Tool Co., Brightwood, Mass.  
 Boston Gear Works, Norfolk, Mass.  
 Borgeson—The Borgeson Mfg. Co., Inc., Torrington, Conn.  
 Bocorselski—Bausch Machine Tool Co., Springfield, Mass.  
 Cooper—Cooper Flexible Transmission Co., Inc., Brooklyn, N. Y.  
 Durbin Co., The, St. Louis, Mo.  
 Evans Alignment—Merchant-Evans Co., Philadelphia, Pa.  
 Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 ♦ G. P.—Gem Mfg. Co., Pittsburgh, Pa.  
 Gray & Prior Machine Co., Hartford, Conn.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 ♦ Ketone—Hercules Powder Co., Wilmington, Del.  
 Mutual Machine Co., Hartford, Conn.  
 Plank 3-Piece—Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Record—Nilson-Miller Co., Hoboken, N. J.  
 Redington Standard Fittings Co., Bethlehem, Pa.  
 Spicer Mfg. Co., Plainfield, N. J.  
 Standard—Universal Machine Co., Bowling Green, O.  
 Stow Mfg. Co., Binghamton, N. Y.  
 Thermoid—Thermoid Rubber Co., Trenton, N. J.  
 Vanderbeek Giant—Ainslie Machine & Tool Works, Hartford, Conn.  
 Walters—Mechanical Device Co., Watervliet, N. Y.

**KEGS, SHOP, STEEL.**

- Ohio Mfg. Co., Painesville, O.

**KETTLES, FOR ACIDS AND CHEMICALS.**

- Duriron—The Duriron Co., Inc., Dayton, O.  
 Improved Appliance Co., Brooklyn, N. Y.

**KETTLES, COPPER.**

- Badger & Sons, E. B., Boston, Mass.  
 Bucyrus Copper Kettle Works Co., Bucyrus, O.  
 Detroit Heating & Lighting Co., Detroit, Mich.  
 Harris, Arthur, Co., Chicago, Ill.

- Improved Appliance Co., Brooklyn, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Star—J. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Welded Steel Barrel Corp., Detroit, Mich.

**KETTLES AND POTS, GALVANIZING.**

- Biggs Boiler Works Co., East Akron, O.  
 Brennan, John, & Co., Inc., Detroit, Mich.  
 Columbiana Boiler Co., Columbiana, O.  
 Evans, F. H., Brooklyn, N. Y.  
 Garwood Bronze & Iron Works, Garwood, N. J.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Milwaukee Boiler Mfg. Co., The, Milwaukee, Wis.  
 Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
 O'Brien Boiler Works Co., John, St. Louis, Mo.  
 Sharon Boiler Works, Sharon, Pa.  
 Warren City Tank & Boiler Co., Warren, O.  
 Wilfong's—Millard F. Wilfong Iron Works, Philadelphia, Pa.

**KETTLES, METAL MELTING.**

- Biggs Boiler Works Co., East Akron, O.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Koven, L. O., & Bro., New York, N. Y.  
 Rockwell Furnace Co., New York, N. Y.  
 Wilfong Iron Works Co., Millard F., Philadelphia, Pa.

**KETTLES, SOAP.**

- American—American Scale Co., Kansas City, Mo.  
 Biggs Boiler Works Co., East Akron, O.  
 Cambridge Iron Works, Cambridge, Mass.  
 Columbiana Boiler Co., Columbiana, O.  
 Dopp—Sowers Mfg. Co., Buffalo, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Littleford Bros., Cincinnati, O.  
 New York Central Iron Works Co., Inc., Hagerstown, Md.

**KETTLES, SODA AND POTASH.**

- Columbiana Boiler Co., Columbiana, Ohio.  
 Ferguson & Lange Fdy. Co., Chicago, Ill.  
 Gray & Prior Machine Co., Hartford, Conn.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Manufacturing Equipment & Engineering Co., South Framingham, Mass.  
 Mather Machine Works, Cleveland, O.

**KETTLES, STEAM JACKETED.**

- American Copper & Brass Works, Cincinnati, O.  
 Badger & Sons, E. B., Boston, Mass.  
 B. F.—Wm. B. Seafie & Sons Co., Pittsburgh, Pa.  
 Biggs Boiler Works Co., East Akron, O.  
 Braman, Dow & Co., Boston, Mass.  
 Brown & Patterson, Brooklyn, N. Y.  
 Bucyrus Copper Kettle Works Co., Bucyrus, O.  
 Cambridge Iron Works, Cambridge, Mass.  
 Canton Boiler & Engineering Co., Canton, O.  
 C. H. & B. Co.—Clark Engine & Boiler Co., Kalamazoo, Mich.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Detroit Heating & Lighting Co., Detroit, Mich.  
 Dopp—Sowers Mfg. Co., Buffalo, N. Y.  
 Evans, F. H., Brooklyn, N. Y.  
 Hamler Boiler & Tank Co., Chicago, Ill.  
 Harris, Arthur, & Co., Chicago, Ill.  
 Hubbert, B. H., Baltimore, Md.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Morrison Bros., Dubuque, Iowa.  
 Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
 New York Central Iron Works Co., Inc., Hagerstown, Md.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Pfaudler Co., Rochester, N. Y.  
 Reeves Bros. Co., Alliance, O.  
 Seafie, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Sowers Mfg. Co., Buffalo, N. Y.  
 Sperry, D. R. & Co., Batavia, Ill.  
 Sprague Canning Machinery Co., Chicago, Ill.  
 Stuart & Peterson Co., Burlington, N. J.  
 Valley Iron Works, Williamsport, Pa.  
 Wilson, F. Cortez, & Co., Chicago, Ill.

**KETTLES, TAP.**

- Aeroli—Aeroli Burner Co., Inc., Union Hill, N. J.  
 Biehl Iron Works, Inc., The, Reading, Pa.  
 Biggs Boiler Works Co., East Akron, O.  
 C. H. & E.—C. H. & E. Mfg. Co., Milwaukee, Wis.  
 Canton Boiler & Engineering Co., Canton, O.  
 Columbiana Boiler Co., Columbiana, O.  
 Connery Co., Philadelphia, Pa.  
 Estate F. H. Evans, Brooklyn, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kennicott Co., Chicago, Ill.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Littleford Bros., Cincinnati, O.  
 Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
 ♦ Macleod Co., The, Cincinnati, O.  
 MacKinnon Boiler & Mach. Co., Bay City, Mich.

Petroleum Iron Works, Sharon, Pa.  
Reeves Bros. Co., Alliance, O.  
Riter-Conley Mfg. Co., Pittsburgh, Pa.

**KETTLES, TRAWLING.**

- Atlas Powder Co., Wilmington, Del.
- ◆ Du Pont—E. I. Du Pont De Nemours & Co., Wilmington, Del.
- Hercules Powder Co., Wilmington, Del.

**KEYS, CENTER OR DRIFT.**

- ◆ Williams, J. H. & Co., Brooklyn, N. Y.

**KEYS, FLAT RIVETED.**

- ◆ Williams, J. H. & Co., Brooklyn, N. Y.

**KEY SEATERS, PORTABLE.**

John T. Burr & Son, Brooklyn, N. Y.

**KEYS, GAS VALVE.**

- Advance—Advance Mfg. Co., Erie, Pa.
- Columbus—The Columbus Brass Co., Columbus, O.
- Eriez—Eriez Stove & Mfg. Co., Erie, Pa.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.

**KEYS, MACHINE.**

- American Cotter Pin Co., Pittsburgh, Pa. (flat riveted).
- Billings & Spencer Co., Hartford, Conn.
- Delaware Steel Co., The, New York.
- Leard, Wm., Co., New Brighton, Pa.
- Moltrup's—Allison & Co., Chester, Pa.
- Moltrup Steel Products Co., Beaver Falls, Pa.
- Morton Mfg. Co., Muskegon Heights, Mich.
- Olney & Warrin, New York, N. Y.
- Mullins Body Corp., Stamping Dept. A, Salem, O.
- ◆ Pennsylvania—Pennsylvania Shafting Co., Spring City, Chester Co., Pa.
- Pickering, R. S., Co., Sharon Hill, Pa.
- Standard Gauge Steel Co., Beaver Falls, Pa. (Woodruff.)
- Hoole Tool & Supply Co., East Rutherford, N. J.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.
- Whitney—Whitney Mfg. Co., Hartford, Conn. (Woodruff.)
- ◆ Woods, T. B., Sons Co., Chambersburg, Pa.

**KEYS, SPLIT.**

Pickering Co., R. S., Sharon Hill, Pa.

**KEYS, STOP COCK.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- Anderson Forge & Machine Co., Detroit, Mich.
- Exeter Brass Works, Exeter, N. H.
- Hauer, J. B., Brooklyn, N. Y.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Modern Iron Works, Quincy, Ill.
- Sanitary Company of America, Linfield, Pa.

**KEYS, STREET WASHER AND HYDRANT.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- ◆ Detroit Valve & Fittings and Detroit Brass Works, Detroit, Mich.
- Hauer, J. B., Brooklyn, N. Y.
- ◆ Hays Mfg. Co., Erie, Pa.
- Illinois Malleable Iron Co., Chicago, Ill.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- N. T. C.—National Tube Co., Pittsburgh, Pa.
- Wolverine Brass Works, Grand Rapids, Mich.

**KEYS, VALVE.**

- Acheson Mfg. Co., Braddock, Pa.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Crane Co., Chicago, Ill.
- Columbus Brass Co., Columbus, O.
- Detroit Brass Works, Detroit, Mich.
- Exeter Brass Works, Exeter, N. H.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Lord—Yonts Co., The C. H., Meadville, Pa.
- N. T. C.—National Tube Co., Pittsburgh, Pa.
- Russell, W. A. & Co., New York, N. Y.
- United Brass Mfg. Co., Cleveland, O.

**KILNS, FOR CLAY PRODUCTS.**

Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Justice—Manufacturers' Equipment Co., Dayton, Ohio

**KILNS, DRY.**

- ◆ A. B. C. and Sirocco—American Blower Co., Detroit, Mich.
- Bellevue Industrial Furnace Co., Detroit, Mich.
- Galland-Henning Mfg. Co., Milwaukee, Wis.
- ◆ Garden City Fan Co., Chicago, Ill.
- Grand Rapids Vapor Kiln Co., Grand Rapids, Mich.
- Hope Fan & Blower Co., Kansas City, Mo.
- International—International Clay Machinery Co., Dayton, Ohio.

National Dry Kiln Co., Indianapolis, Ind.  
North Coast—North Coast Dry Kiln Co., Seattle, Wash.  
Standard Dry Kiln Co., Indianapolis, Ind.

**KILNS, LIME & CEMENT.**

K. C. Co.—Cruse-Koemper Co., Ambler, Pa.  
Smidth, F. L. & Co., New York.

**KITS, PLUMBERS' TOOL.**

(See also "Chisels," "Irons," etc.)

Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
Woodward-Wanger Co., Philadelphia.

**KITS, TOOL (WRENCH).**

- Hinsdale—Hinsdale Mfg. Co., Chicago, Ill.
- ◆ Williams, J. H., & Co., Brooklyn, N. Y.

**KNIVES, BELT.**

- American Tool & Machine Co., Boston, Mass.
- Clemson Knife Co., Woburn, Mass.
- Lovejoy, D. & Son, Lowell, Mass. (Splitting.)
- Lyons, Edward S., Woburn, Mass.
- Mulherin Belt Knife Co., Peabody, Mass.
- ◆ Simonds Mfg. Co., Fitchburg, Mass.

**KNIVES, CHIPPING.**

D. R. Barton—Mack & Co., Rochester, N. Y.  
Bernz, Otto, Newark, N. J.  
Johnson, Wm., Newark, N. J.  
M. & M.—Mitts & Merrill, Saginaw, Mich.  
Ohio Knife Co., Cincinnati, O.  
Sayre, L. A., Company, Newark, N. J.

**KNIVES, COOPERAGE, LEATHER, PAPER AND VENEER.**

D. Lovejoy & Son, Lowell, Mass.

**KNIVES, DRAW.**

Bradley's Sons, S. W., Westport, Conn.  
Buck Bros., Millbury, Mass.  
Crescent—Crescent Co., Inc., The, Meriden, Conn.  
Greenlee—Greenlee Bros. & Co., Rockford, Ill.  
Jennings, C. F., & Co., New York, N. Y.  
Peck, Stow & Wilcox Co., Southington, Conn.  
Perfect Handle—The H. D. Smith Co., Plantsville, Conn.  
Russell & Irwin Mfg. Co., New Britain, Conn.  
Swan Co., The, James, Seymour, Conn.  
Wilkinson & Co., A. J., Boston, Mass. (folding).

**KNIVES, HACK.**

Landers, Frary & Clark, New Britain, Conn.  
W. C. Carver—Carver Tool Works, Spring Valley, N. Y.

**KNIVES, MACHINE.**

- American Saw & Tool Works, Chicago, Ill.
- Anderson Knife & Bar Co., Anderson, Ind.
- Arnold—H. H. Arnold Co., Inc., Rockland, Mass.
- ◆ Atkins, E. C., & Co., Indianapolis, Ind.
- Bailey & Blendinger Mfg. Co., Woburn, Mass.
- Branch Saw Works, St. Louis, Mo.
- Chattanooga Saw Works, Chattanooga, Tenn.
- Cleveland Knife & Forge Co., Cleveland, O.
- Detroit Edge Tool Works, Detroit, Mich. (Paper cutting).
- ◆ Dieston, Henry & Sons, Inc., Philadelphia, Pa.
- Dowd Knife Works, R. J., Beloit, Wis.
- Eagle Knife & Bar Works, Holyoke, Mass.
- Empire Machine Works, Mount Morris, N. Y.
- Fowle, John L., Woburn, Mass.
- Fox Machine Co., Grand Rapids, Mich.
- Gage, E. E., Mfg. Co., Gardner, Mass.
- Grimiths, Albert, Saw Co., The, Boston, Mass.
- Grammes, L. F., & Sons, Allentown, Pa.
- Hankey, A., & Co., Rochdale, Mass.
- Hardy, L., Co., Worcester, Mass.
- Henry & Allen, Auburn, N. Y.
- Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.
- Lancaster Machine & Knife Works, Lancaster, N. Y.
- Lovejoy, D., & Son, Lowell, Mass.
- Loyd, John, New York, N. Y.
- Mack Co., Rochester, N. Y.
- Munson Knife Works, Grand Rapids, Mich.
- Ohio Knife Co., Cincinnati, O.
- Oliver Machinery Co., Grand Rapids, Mich.
- Pittsburgh Knife & Forge Co., Pittsburgh, Pa.
- Redin, Ekstrom & Co., Rockford, Ill.
- Simonds, A. A., & Son, Dayton, O.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- Sweet Temper—Cleveland Knife & Forge Co., Cleveland, O.
- Taylor, Stiles & Co., Riegelsville, N. J.
- Tinker, F., & Sons Co., Philadelphia, Pa.
- Toledo Saw & Supply Co., The, Toledo, O.
- Wapakoneta Machine Co., Wapakoneta, Ohio (paper, planer and veneer).
- White, L. & I. J., Co., Buffalo, N. Y.
- Woodworkers' Tool Works, Chicago (moulding).
- Worden Tool Co., Cleveland, O.

**KNIVES, PACKING OR PADDLE.**

Verona Tool Works, Pittsburgh, Pa.

**KNIVES, ROTARY SHEAR.**

Hunter Saw & Machine Co., Pittsburgh, Pa.  
Tinker, F., & Sons, Company, Philadelphia, Pa.

**KNIVES, WASTE, CHINA.**

(See also Buttons.)

Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Hutter, Karl, Inc., New York, N. Y.  
Maddock's Sons Co., Thomas, Trenton, N. J.

**KNURLS OR MILLING WHEELS.**

(See also "Tools, Knurl.")

Welch, T. F., & Co., Boston, Mass.  
Western Automatic Machine Screw Co., Elyria, Ohio (wrench).

**LABELS AND HOLDERS FOR PLUMBING SHOPS.**

Haddon Bin Label Co., Haddon Heights, N. J.

**LACERS, BELT.**

(See "Belt Lacers.")

**LACING, BELT, GUT.**

American Gut String Mfg. Co., Chicago, Ill.

**LACING, BELT, LEATHER AND RAWHIDE.**

- A. B. C.—Kerr & Co., Inc., New York, N. Y.
- Acme Chrome Ajax, Lace—Norwich Belt Mfg. Co., Norwich, Conn.
- Acme—Weathered-Thompson Co., Pawtucket, R. I.
- Alenco—W. D. Allen Mfg. Co., Chicago, Ill.
- American Belting & Tanning Co., Boston, Mass.
- American Gut String Mfg. Co., Chicago, Ill.
- Anchor—Kayser Tanning Co., St. Louis, Mo.
- Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.
- Bickford & Francis Belting Co., Buffalo, N. Y.
- Black, Jewell—Jewell Belting Co., Hartford, Conn.
- Blackstone, Congress—Bennett-Dreyer Belting Co., St. Louis, Mo.
- Blue Eagle—American Lace Leather Co., Inc., Richmond, Va.
- Blu-Skin—Barnes, Henry K., Co., Boston, Mass.
- Blue Velvet Buckskin—California Tanning Co., St. Louis, Mo.
- Bonner & Barnewall, Inc., New York, N. Y.
- Bradford Belting Co., The, Cincinnati, O.
- Bridgeport—Bridgeport Belting Co., Bridgeport, Conn.
- Chicago Belting Co., Chicago, Ill. Trade names—Indian Tanned, Reliance, Sterling.
- Central Belting Co., New York, N. Y.
- Chicago Selected—Chicago Rawhide Mfg. Co., Chicago, Ill.
- Chrome and Lion—N. Y. Leather Belting Co., New York, N. Y.
- Chrome—National Leather Belting Co., New York, N. Y.
- Chrome—Shultz Belting Co., St. Louis, Mo.
- Cochecho—I. B. Williams & Sons, Dover, N. H.
- Colonial Leather Co., Chicago, Ill.
- Cornelius Mill Furnishing Co., St. Louis, Mo.
- Coupe, Wm., Co., South Attleboro, Mass.
- Crescent Belt Fastener Co., Inc., New York, N. Y.
- Crow-Tan—Colonial Leather Co., Chicago, Ill.
- Crown Tanned, Crown Mechanical, Hercules, Granite—Page Belting Co., Concord, N. H.
- Defiance, Rawhide—Norwich Belt Mfg. Co., Inc., Norwich, Conn.
- Druidox, Hindu, Musco—The Druid Oak Belting Co., Inc., Baltimore, Md.
- Dux-bak Chrome, Giant Tanned, Gowanus Rawhide—Chas. A. Schieren Co., New York, N. Y.
- Eagle—American Lace Leather Co., Inc., Richmond, Va.
- Eagle—Hide Leather & Belting Co., Indianapolis, Ind.
- Elk—California Tanning Co., St. Louis, Mo.
- Excelsior—Wm. Coupe Corp., South Attleboro, Mass.
- Extra—H. F. Kempe & Co., Chicago, Ill.
- Femco—Fairbanks, Morse & Co., Chicago, Ill.
- Flexible Steel Lacing Co., Chicago, Ill.
- Flintstone—Ladew Co., Inc., Glen Cove, N. Y.
- Fredrich Belting Co., St. Louis, Mo.
- Grafton & Knight Mfg. Co., The, Worcester, Mass. Trade names—G. & K., Indian Tanned, Crescent, Royal Worcester.
- Helvetia—Groezingers, G., Sons, Lancaster, Pa.
- Hudson Belting Co., Worcester, Mass. (Chrome, Indian Tanned.)
- Hunt Co., Henry C., Boston, Mass.
- Illinois Mechanical Leather Co., Chicago, Ill.
- Indian Tanned—Norwich Belt Mfg. Co., Inc., Norwich, Conn.
- Indian Tanned—Ray State Belting Co., Boston, Mass.
- Indian Tanned—Central Belting Co., New York, N. Y.
- Indian Tanned—I. B. Williams & Sons, Dover, N. H.

Indian Tan—National Leather Belting Co., New York.  
Indian Tan—Shultz Belting Co., St. Louis, Mo.

- Ireson, Chas. L., Inc., Boston, Mass.
- Jewell—Jewell Belting Co., Hartford, Conn.
- Johnson Belting Co., New York, N. Y.
- Kerr's Improved, Kerr's Original—Kerr & Co., Inc., New York, N. Y.
- King Phillip—Jewell Belting Co., Hartford, Conn.
- Ladew, Estate of Edward R., New York, N. Y.
- Leather Preserver Mfg. Co., Chicago, Ill.
- Long Life—Missouri Belting Co., St. Louis, Mo.
- L. X. Safety First (twisted)—Manufacturers' Belt Hook Co., Chicago, Ill.
- Massasoit—Holyoke Belting Co., Holyoke, Mass.
- McLanathan, F. W., & Son, Lawrence, Mass.
- Monarch—The Bradford Belting Co., Cincinnati, O.
- Mule Skin—N. Palmer & Co., Bridgeport, Conn.
- National Leather Belting Co., New York, N. Y.
- Navajo—The Bradford Belting Co., Cincinnati, O.
- Ne Pac—Capen Belting & Rubber Co., St. Louis, Mo.
- Neverbreak—California Tanning Co., St. Louis, Mo.
- Nott, W. S., Co., Minneapolis, Minn.
- New York Leather Belting Co., New York, N. Y. Trade names—Bull Dog, Phoenix.
- Nox All—Colonial Leather Co., Chicago, Ill.
- Ofco Tan—Olmstead Flint Co., Cambridge, Mass.
- Oriole—I. B. Williams & Sons, Dover, N. H.
- Page Belting Co., Concord, N. H.
- Palmer, N., & Co., Bridgeport, Conn.
- Pawnee Indian Tan—Kayser Tanning Co., St. Louis, Mo.
- Pequott—Holyoke Belting Co., Holyoke, Mass.
- Peerless—California Tanning Co., St. Louis, Mo.
- Philadelphia Belting Co., Philadelphia.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Potomac—Loeb Bros. Leather Belting Co., New York.
- Ranville, F., Co., Grand Rapids, Mich.
- Rawhide—Shultz Belting Co., St. Louis, Mo.
- Reinhold Belting & Supply Co., Brooklyn, N. Y.
- Reliance, Sterling—Chicago Belting Co., Chicago, Ill.
- Rex—H. F. Kempe & Co., Chicago, Ill.
- Schieren, Chas. A., Co., New York, N. Y.
- Shield—McCauley Belting Co., Chicago, Ill.
- Shingle Leather Co., Philadelphia, Pa.
- Shultz Belting Co., St. Louis, Mo.
- Southwick, Geo. W., Co., Stamford, Conn. (twisted).
- Steer—Joseph Meier's Sons, Newark, N. J.
- Surface Tan—American Lace Leather Co., Inc., Richmond, Va.
- Tan 9—Couse & Bolten, Inc., Newark, N. J.
- Tannate—J. E. Rhoads & Sons, Philadelphia, Pa.
- Unexcelled—Geo. Rahmann & Co., New York, N. Y.
- Victor—Missouri Belting Co., St. Louis, Mo.
- Vim—E. F. Houghton & Co., Philadelphia (plain and metal tipped).
- Walker, Chas. W. Sons & Co., Newark, N. J.
- Warren Indian Tan, Warren Raw Hide—Warren Belting Co., Worcester, Mass.
- White, Alex., & Co., Dorchester, Mass.
- Williams, I. B., & Sons, Dover, N. H.

**LACING, BELT, STEEL AND WIRE.**

- A. B. C.—Kerr & Co., Inc., New York, N. Y.
- Alligator—Flexible Steel Lacing Co., Chicago, Ill.
- Bickford & Francis Belting Co., Buffalo, N. Y.
- Bristol's—The Bristol Co., Waterbury, Conn.
- Bul Dog—Detroit Belt Lacer Co., Detroit, Mich.
- Callahan & Co., Geo., New York, N. Y.
- Climax Flexible—Manufacturers' Belt Hook Co., Chicago, Ill.
- Clipper—Clipper Belt Lacer Co., Grand Rapids, Mich.
- Crescent—Columbia Novelty Mfg. Co., St. Louis, Mo.
- Eagle Belting Co., Chicago, Ill.
- Flexible—Flexible Steel Lacing Co., Chicago.
- Golden Rule—Columbia Mfg. Co., St. Louis, Mo.
- Globe—Hayden Supply Co., Grand Rapids, Mich.
- Hart Mfg. Co., St. Louis, Mo.
- Hercules—Hercules Belt Lace Mfg. Co., Chicago, Ill.
- Kerr's Improved—Kerr & Co., Inc., New York, N. Y.
- Leather Preserver Mfg. Co., Chicago, Ill.
- L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.
- O. K.—Hudson Belt Fastener Co., New York.
- Page Belting Co., Concord, N. H.
- Peerless, Jackson—Oliver-Barth Jack Co., Milwaukee, Wis.
- Perfection—Hudson Belt Fastener Co., New York.
- Rainbow—Manufacturers' Belt Hook Co., Chicago.
- Southwick's—The Geo. W. Southwick Co., New York.
- Stag—Columbia Novelty Mfg. Co., St. Louis, Mo.
- Star—Star Mfg. Co., Stamford, Conn.
- Trojan—Leather Preserver Mfg. Co., Chicago, Ill.
- 20th Century—Manufacturer's Belt Hook Co., Chicago, Ill.

**LADDERS, BOILER ROOM, STEEL.**

New Britain Machine Co., The, New Britain, Conn.

**LADDERS, CHAIN CONSTRUCTION.**

Victory—American Fire Apparatus Co., New York, N. Y.



**LADDERS, FIRE, EXTENSION.**

Hayward & Co., S. F., New York, N. Y.  
 Pirsch, Peter & Sons Co., Kenosha, Wis.  
 Rope Fire Escape Co., Philadelphia, Pa.

**LADDERS, SAFETY.**

Rope Fire Escape Co., Philadelphia, Pa.

**LADDERS, SWIMMING POOL.**

Hughes, W. R., Co., Cleveland, O.

**LADDERS, TRAVELING OR ROLLING.**

Reliable—Allith-Prouty Co., Danville, Ill.  
 Myers, F. B., & Bros., Ashland, O.

**LADDERS, WOOD, FACTORY.**

Perfection—Berger Bros. Co., Philadelphia, Pa.  
 Red Head—Consolidated Pump Co., Toledo, Ohio.

**LADLES, METAL MELTING, SKIMMING AND POURING.**

Advance—J. A. Zura Mfg. Co., Erie, Pa.  
 American Saw & Tool Works, Chicago.  
 American Scale Co., Kansas City, Mo.  
 Berger Bros. Co., Philadelphia, Pa.  
 Bernz, Otto, Newark, N. J.  
 Buch Foundry Equipment Co., York, Pa.  
 Central Foundry Sup. Co., Columbus, Ohio.  
 Columbian Boiler Co., Columbian, O.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Duquesne Steel Foundry Co., Pittsburgh, Pa.  
 Holland—Hollands Mfg. Co., Erie, Pa.  
 Irvington Mfg. Co., Irvington, N. J.  
 Johnson, Wm., Newark, N. J.  
 L. & G.—Lalance & Grosjean Mfg. Co., New York.  
 Link Mfg. Co., Kansas City, Mo.  
 Littleford Bros., Cincinnati, O.  
 McCormick, J. S., Co., Pittsburgh, Pa.  
 Mullins Body Corp., Stamping Dept. A, Salem, O.  
 Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
 National Tool Co., Brooklyn, N. Y.  
 Neway (bottom pour)—Great Lakes Chemical Co., Appleton, Wis.  
 Nor-Bro—Norris Brothers, Inc., Robinson, Ill.  
 Obermayer, S. Co., The, Cincinnati, Ohio.  
 Osborn Mfg. Co., Cleveland, O.  
 Paxson, J. W., Co., Philadelphia, Pa.  
 Pollard, Jos. G., Co., Inc., Brooklyn, N. Y.  
 Pratt, Wm. E., Mfg. Co., Chicago, Ill.  
 Red-Hot—Ashton Mfg. Co., Newark, N. J.  
 Ritter-Conly Co., Pittsburgh, Pa.  
 Sayre, L. A., Company, Newark, N. J.  
 Schmitt, Wm. Co., Newark, N. J.  
 Sly, W. W., Mfg. Co., Cleveland, Ohio.  
 Steel & Tube Co. of America, Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

**LADLES, STEEL.**

Columbian Boiler Co., Columbian, Ohio.  
 McNeil, James & Bro., Co., Pittsburgh, Pa.  
 Pennsylvania Engineering Works, New Castle, Pa.

**LAGGING, MAGNESIA, LOCOMOTIVE.**

(See also "Covering, Asbestos, Pipe and Boiler.")

American Insulating Co., Alexandria, Ind.  
 Armstrong Cork & Insulation Co., Pittsburgh, Pa.  
 Carey—The Philip Carey Co., Cincinnati, O.  
 Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
 Franklin—Franklin Mfg. Co., Franklin, Pa.  
 Jackson, Peerless—Oliver Mfg. Co., Chicago, Ill.  
 Johns-Manville Co., H. W., New York, N. Y.  
 Keasbey & Mattison Co., Ambler, Pa.  
 Mikesell Brothers Co., Chicago, Ill.  
 National Magnesia Mfg. Co., San Francisco, Cal.  
 Norristown Magnesia & Asbestos Co., Norristown, Pa.  
 Union Asbestos & Rubber Co., Chicago, Ill.

**LAMPS, ACETYLENE GAS.**

(See also "Burners, Acetylene.")

Klemm & Co., Philadelphia, Pa.  
 Milburn—Alexander Milburn Co., The, Baltimore, Md.  
 Radio Ray—Radio Ray Light Co., Brooklyn, N. Y.  
 Simmons Co., John, New York, N. Y.

**LAMPS, ACETYLENE, CAMPERS' AND SPORTSMEN'S.**

Buckeye—The Macleod Co., Cincinnati, O.  
 Justrite Mfg. Co., Chicago, Ill.  
 Milburn—Alexander Milburn Co., The, Baltimore, Md.  
 Simonds, John, Co., New York, N. Y.

**LAMPS, ELECTRIC, INCANDESCENT.**

Abolites—Adams Bagnall Electric Co., The, Cleveland, O.  
 Aetna Electric Co., Div. of Franklin Electric Mfg. Co., New York.

Consolidated Electric Lamp Co., Danvers, Mass.  
 Franklin Electric Mfg. Co., Hartford, Conn.  
 General Electric Co., Schenectady, N. Y.  
 Hygrade Lamp Co., Salem, Mass.  
 J.-M. Linolite—Johns-Manville Co., New York.  
 Lux Mfg. Co., New York, N. Y.  
 Mazda—General Electric Co., Schenectady, N. Y.  
 Newman Electric Lamp Co., Cincinnati, O.  
 New York Incandescent Lamp Co., New York, N. Y.  
 Rooney, F. J., Lamp Co., Hoboken, N. J.  
 Western Electric Co., Inc., Chicago, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
 Westinghouse Lamp Co., Bloomfield, N. J.

**LAMPS, ELECTRIC, MERCURY VAPOR.**

General Electric Co., Schenectady, N. Y.  
 Western Electric Co., Chicago, Ill.

**LAMPS, ELECTRIC, PORTABLE EXTENSION.**

Breeze Mfg. Co., Newark, N. J.  
 Steelite—Inland Electric Co., Chicago, Ill.

**LAMPS, ENGINEERS' HAND.**

Deverall's—Deverall Perfection Mfg. Co., Brooklyn, N. Y.  
 Eagle Mfg. Co., Wellsburg, W. Va.  
 Hall's—Hall Mfg. Co., New York, N. Y.  
 Kaufman Mfg. Co., New York, N. Y.  
 Knapp Manufacturing Co., New York, N. Y.  
 Malleable Iron Fittings Co., Branford, Conn.  
 Milburn, Alexander Co., The, Baltimore, Md.  
 National Marine Lamp Co., Forestville, Conn.  
 Walters Mfg. Co., Pittsburgh, Pa.

**LAMPS, FLARE.**

(See "Lights, Flare, Contractors.")

**LAMPS, MARINE.**

National Marine Lamp Co., New York, N. Y.  
 Perkins Marine Lamp Co., Brooklyn, N. Y.

**LAMPS, MINERS' SAFETY.**

American Bull Dog—Harker Mfg. Co., Cincinnati, Ohio (Carbide).  
 Anton Carbide—Geo. Anton & Bro., Monongahela, Pa.  
 Baldwin—John Simmons Co., New York, N. Y.  
 Beard Deputy-Clanny—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Brilliant Search Light—Brilliant Search Light Mfg. Co., Chicago, Ill.  
 Brite-Lite—Harker Mfg. Co., Cincinnati, O.  
 Cremer—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Davy—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Eagle, Globe, Star—Anton, Geo., & Bro., Monongahela, Pa.  
 Edison Electric—Mine Safety Appliances Co., Pittsburgh, Pa.  
 Everhart Brass Works, Scranton, Pa.  
 Grier Brothers Co., The, Pittsburgh, Pa.  
 Hughes Bros. Brass Works, Scranton, Pa.  
 Hunt—Alexander E. Hunt, Scranton, Pa. (oil).  
 Ingersoll-Rand Co., New York, N. Y.  
 Justrite—The Justrite Co., Chicago, Ill. (acetylene pit lamp).  
 Koehler Mfg. Co., Marlboro, Mass. (electric).  
 Milburn—Alexander Milburn Co., The, Baltimore, Md.  
 Portable Electric Safety Light Co., Newark, N. J.  
 Shanklin Mfg. Co., Springfield, Ill.  
 Standard Oil Co. of New York, New York, N. Y.  
 Vesta—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Wolf Type—Wolf Safety Lamp Co. of America, Inc., Brooklyn, N. Y.

**LAMPS, SQUARE, ENGINE ROOM.**

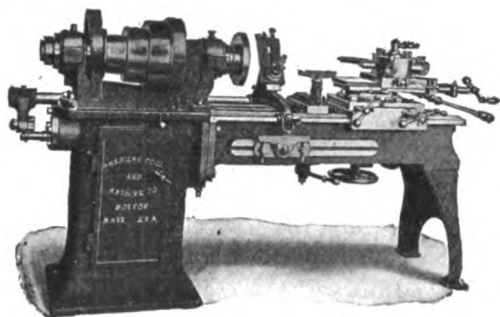
Defiance Lantern & Stamping Co., Rochester, N. Y.

**LAMPS, WATER GAUGE.**

Johnson Mfg. Co., Urbana, O.  
 Knapp Mfg. & Supply Co., New York, N. Y.

**LANTERNS.**

Acorn Uni-Lite—Acorn Brass Mfg. Co., Chicago, Ill.  
 American—American Gas Machine Co., Albert Lea, Minn.  
 Defiance Lantern & Stamping Co., Rochester, N. Y.  
 Diamond Light—The Akron Lamp Co., Akron, O. (gasoline).  
 Dietz—R. E. Dietz Co., New York, N. Y. (hand driving, mill, railroad, fire dept.).  
 Economy—Economy Gas Machine Co., Rochester, N. Y.  
 Economy Lamp Co., Kansas City, Mo.  
 Handlan—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Hayward & Co., S. F., New York, N. Y. (fire department).  
 Justrite Mfg. Co., Chicago, Ill. (for mine use).



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**Knight Light & Soda Fountain Co., Chicago, Ill.**  
**Matchlite—National Stamping & Electric Works, Chicago, Ill.**  
**National Marine Lamp Co., Forestville, Conn.**  
**Rayo—Standard Oil Co., New York, N. Y.**  
**Safety Fire Extinguisher Co., The, New York, N. Y.**  
**Supreme—Embury Mfg. Co., Warsaw, N. Y.**  
**Yale Light Co., The, Chicago, Ill.**

## LANTHERNS, ELECTRIC, DRY BATTERY.

**Federal—Federal Electric Co., Chicago, Ill.**  
**Grether—Grether Fire Equipment Co., Dayton, Ohio.**  
**Larkin Mfg. Co., Dayton, O.**  
**Protecto—The Protecto Safety Appliance Co., Newark, N. J.**  
**Steelite—Inland Electric Co., Chicago, Ill.**

## LANTERN STANDS, FOR OUTDOOR SIGNALS.

**Berger's—Berger Specialty Mfg. Co., Inc., Richmond Va.**

## LARRIES, COAL WEIGHING, FOR STOKERS.

**Beaumont, R. H., Co., Philadelphia, Pa.**  
**Scottdale—Scottdale Machine & Mfg. Co., Scottdale, Pa.**  
**Specialty Engineering Co., Philadelphia, Pa.**

## LATCHES, CLOSET DOOR.

**Columbus Brass Co., Columbus, O.**

## LATCHES, FIRE DOOR, BOILER.

**De Waters Safety Latch Co., Far Rockaway, N. Y.**

## LATERALS, PIPE, STEAM.

**McNab & Harlin Mfg. Co., New York, N. Y.**  
**N. T. C.—National Tube Co., Pittsburgh, Pa.**

## LATHES, AXLE TURNING.

**Betts Machine Co., Inc., Rochester, N. Y.**  
**Lodge & Shipley Machine Tool Co., Cincinnati, O.**  
**Niles-Bement-Pond Co., New York, N. Y.**  
**Pacific Iron Works, Bridgeport, Conn.**  
**Putnam—Manning, Maxwell & Moore, Inc., Fitchburg, Mass.**  
**Sellers & Co., Inc., Wm., Philadelphia, Pa.**

## LATHES, BENCH.

**Ames—B. C. Ames & Co., Waltham, Mass.**  
**Builders Iron Foundry, Providence, R. I.**

**Canedy-Otto Mfg. Co., Chicago Heights, Ill.**  
**Cataract—Hardinge Bros., Inc., Chicago, Ill.**  
**Dalton Manufacturing Corp., Sound Beach, Conn.**  
**Elgin—The Elgin Tool Works, Elgin, Ill.**  
**F. M. C.—Flather Mfg. Co., The, Nashua, N. H.**  
**Goodell-Pratt Co., Greenfield, Mass.**  
**Hardinge Bros., Inc., Chicago, Ill.**  
**Hjorth—Hjorth Lathe & Tool Co., Boston, Mass.**  
**Meriden Machine Tool Co., The, Meriden, Conn. (glass engravers).**  
**Moseley Lath Co., The, Elgin, Ill.**  
**Oliver Mfg. Co., The W. W., Buffalo, N. Y.**  
**Pratt & Whitney Co., Hartford, Conn.**  
**Reed Co., F. E., Worcester, Mass.**  
**Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.**  
**Seneca Falls Mfg. Co., Inc., The, Seneca Falls, N. Y.**  
**Sloan & Chace Mfg. Co., Ltd., Newark, N. J.**  
**South Bend Lathe Works, South Bend, Ind.**  
**Star—Seneca Falls Mfg. Co., The, Seneca Falls, N. Y.**  
**Stark Tool Co., Waltham, Mass.**  
**Up-to-Date Tool Co., Boston, Mass.**  
**Van Norman Machine Tool Co., Springfield, Mass.**  
**Wade-American Tool Co., Boston, Mass.**  
**Waltham Watch Tool Co., Springfield, Mass.**  
**Welch, T. F., & Co., Boston, Mass.**  
◆ **Wells—Greenfield Tap & Die Corp., Greenfield, Mass.**

## LATHES, BOLT AND NUT.

(See "Machines, Bolt and Nut.")  
**Prybil, P., Machine Co., New York, N. Y.**

## LATHES, BRASS FINISHERS.

**Acme, Cincinnati—Acme Machine Tool Co., Cincinnati, O.**  
**Fox—American Tool & Machine Co., Boston, Mass.**  
**Grabo, E. O., New York, N. Y.**  
**Springfield Machine Tool Co., Springfield, O.**  
**Warner & Swasey Co., The, Cleveland, O.**  
**Wood Turret Machine Co., Brazil, Ind.**

## LATHES, BUFFING AND POLISHING.

**American Tool & Machine Co., Boston, Mass.**  
**Bennett-O'Connell Co., Chicago, Ill.**  
**Blount Co., J. G., Everett, Wash.**  
**Cincinnati Electrical Tool Co., The, Cincinnati, O.**  
**Clizbe—Clizbe Bros. Mfg. Co., Plymouth, Ind.**  
**Columbia Mfg. Co., Belleville, Ill.**  
**Emerson Electric Mfg. Co., St. Louis (small).**  
**Gardner Machine Co., Beloit, Wis.**  
**Glow—The Glow Electric Co., Cincinnati, O.**  
**Goodell-Pratt Co., Greenfield, Mass.**  
**Hammond Mfg. Co., Cleveland, Ohio.**  
**Hisey-Wolf Machine Co., Cincinnati, Ohio.**  
**Mann, Chas. A., Providence, R. I.**  
**Meriden Press & Drop Co., Meriden, Conn.**  
**New Britain—New Britain Machine Co., The, New Britain, Conn.**  
**Northampton Emery Wheel Co., Leeds, Mass.**  
**Northern—Northern Electrical Mfg. Co., Madison, Wis.**  
**Rosenberg Motor & Mfg. Co., A., Baltimore, Md.**  
**Safety First—C. L. Hawes, Ashabula, O.**  
**Springfield Mfg. Co., The, Bridgeport, Conn.**  
**Waterbury-Farrell Fdy. & Mach. Co., Waterbury, Conn.**

## LATHES, CAM TURNING.

**Melling—Walcott Lathe Co., Jackson, Mich.**

## LATHES, CHUCKING, AUTOMATIC.

**Gisholt—Gisholt Machine Co., Madison, Wis.**  
**LeBlond Machine Tool Co., R. K., Cincinnati, Ohio.**  
**Reed-Prentice Co., Worcester, Mass.**  
**Rockford—Rockford Machine Tool Co., Rockford, Ill.**  
**Tilted Turret—Wood Turret Machine Co., Brazil, Ind.**

## LATHES, CONE PULLEY.

**National—National Lathe Co., Cincinnati, Ohio.**  
**Reed-Prentice Co., Worcester, Mass.**

## LATHES, CRANK SHAFT.

**Boys & Emmes Machine Tool Co., Cincinnati, O.**  
**Le Blond—R. K. Le Blond Mach. Tool Co., Cincinnati, O.**  
**Lodge & Shipley Machine Tool Co., Cincinnati, O.**  
**Manning, Maxwell & Moore, Inc., New York, N. Y.**  
**Niles-Bement-Bond Co., New York, N. Y.**  
**Wickes Brothers, Saginaw, Mich.**

## LATHES, DRILLING.

**American Tool & Machine Co., Boston, Mass.**  
**Diamond Machine Co., Providence, R. I.**  
**Whitcomb-Blaisdell Machine Co., Worcester, Mass.**

## LATHES, ENGINE.

**Atlas—Taylor Machine Co., The, Cleveland, O.**  
**Advance-Rumely Co., La Porte, Ind.**  
**Advance—Universal Machinery Co., Milwaukee, Wis.**  
**American Tool Works Co., Cincinnati, O.**

Amtaw—American Machine Tool Engineering Works, Chicago, Ill.  
 Axelsson—Axelson Machine Co., Los Angeles, Cal.  
 Barnes Co., W. F. & John, Rockford, Ill.  
 Barnes Drill Co., Inc., Rockford, Ill.  
 Betts Machine Co., Inc., Rochester, N. Y.  
 Bradford—The Bradford Machine Tool Co., Cincinnati.  
 Betts Machine Co., Rochester, N. Y.  
 Boye & Barnes Machine Tool Co., Cincinnati, O.  
 Carroll-Jamieson Machine Tool Co., Batavia, O.  
 ♦ Champion—Champion Tool Works, Cincinnati, O.  
 Chard—Chard Lathe Co., Newcastle, Ind.  
 Cisco Machine Tool Co., Cincinnati, O.  
 Cleveland Lathe & Machinery Co., Cleveland, O.  
 Cone, Frank L., Windsor, Vt.  
 Conover—Overkamp Machine & Tool Co., Dayton, O.  
 Crawford—Crawford Machine Tool Co., Inc., New York.  
 Dalton Six—Dalton Manufacturing Corp., Sound Beach, Conn.  
 Davenport Locomotive Works, Davenport, Ia.  
 Davis Machine Tool Co., Rochester, N. Y.  
 Economy—Rockford Lathe & Drill Co., Rockford, Ill.  
 Elyria Machine Co., Elyria, Ohio.  
 Fairbanks—The Fairbanks Machine Tool Co., Springfield, O.  
 Fay & Scott, Dexter, Me.  
 Filsmith—Smith, Philip Mfg. Co., Sidney, O.  
 Flather & Co., Inc., Nashua, N. H.  
 Flather Mfg. Co., E. J., Nashua, N. H.  
 Flather Planer & Shaper Co., Nashua, N. H.  
 Foster Machine Co., Elkhart, Ind.  
 Fulton—Fulton Machine Tool Co., Chicago, Ill.  
 Garvin Machine Co., The, New York, N. Y.  
 Giddings & Lewis Mfg. Co., Fond du Lac, Wis.  
 Globe—Globe Machinery & Supply Co., Des Moines, Iowa.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Greaves-Klusman Tool Co., Cincinnati, O.  
 Greenlee—Greenlee Bros. & Co., Rockford, Ill.  
 H.-S.-G.—Houston Stanwood & Gamble Co., Cincinnati, Ohio.  
 Hamilton Machine Tool Co., Hamilton, O.  
 Harrington Sons & Co., Edwin, Philadelphia, Pa.  
 Hendey Machine Co., Torrington, Conn.  
 Hercules—Hercules Machine & Tool Co., Inc., New York.  
 Hill, Clark & Co., Cleveland, O.  
 Johnson, Jr., Co., Inc., I. H., Philadelphia, Pa.  
 LeBlond Machine Tool Co., R. K., Cincinnati, O.  
 Lehmann Machine Co., St. Louis, Mo.  
 Little Giant—Little Giant Co., Mankato, Minn.  
 Lodge & Shipley Machine Tool Co., Cincinnati, O.  
 Lo-Swing—Fitchburg Machine Works, Fitchburg, Mass.  
 McCabe, J. J., Lathe & Mach'y Corp., New York, N. Y.  
 Mann, Chas. A., Providence, R. I.  
 ♦ Manning, Maxwell & Moore, Inc., New York, N. Y.  
 Master—Master Machine Tool Co., New York, N. Y.  
 Monarch—Monarch Machine Tool Co., Sidney, O.  
 Morris—Morris Machine Tool Co., Cincinnati, O.  
 Mueller—Mueller Machine Tool Co., Cincinnati, O.  
 Myers—Myers Machine Tool Corp., Columbia, Pa.  
 National—National Lathe Co., Cincinnati, O.  
 N. E. A. T.—National Engineering & Tool Works, Oak Park, Ill.  
 New Haven—Driggs Ordnance & Mfg. Corp., New York, N. Y.  
 New Shepard, Sterling—Shepard Lathe Co., Rising Sun, Ind.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oliver Machine Co., Grand Rapids, Mich.  
 Pittsburgh—Pittsburgh Machine Tool Co., Braddock, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 Prentiss Tool & Supply Co., New York, N. Y.  
 Rahn-Larmon Co., The, Cincinnati, O.  
 Reed-Prentice Co., Worcester, Mass.  
 Robbins Machine Co., The, Worcester, Mass.  
 Rockford Drilling Machine Co., Rockford, Ill.  
 Ryerson-Conradson—Conradson Machine Tool Co., Green Bay, Wis.  
 San Francisco Engineering Co., San Francisco, Cal.  
 Sebastian Lathe Co., Cincinnati, O.  
 Sellers & Co., Inc., Wm., Philadelphia, Pa.  
 ♦ Sidney Machine Tool Co., Sidney, O.  
 South Bend Lathe Works, South Bend, Ind.  
 Springfield Machine Tool Co., The, Springfield, O.  
 Star—Seneca Falls Mfg. Co., Inc., The, Seneca Falls, N. Y.  
 Steptoe—John Steptoe Co., Cincinnati, O.  
 Summitt Machine Works, Worcester, Mass.  
 Sundstrand—Rockford Tool Co., Rockford, Ill.  
 The Cincinnati Lathe—The Cincinnati Lathe & Tool Co., Cincinnati, O.  
 Union—Union Lathe Works, The, York, Pa.  
 Vandyck Churchill Co., New York, N. Y.  
 Walcott Lathe Co., Jackson, Mich.  
 Westlund, Carl G. Co., Worcester, Mass.  
 Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.  
 Wickes Brothers, Saginaw, Mich.  
 Willard Machine Tool Co., The, Cincinnati, O.  
 Worcester Lathe Co., Worcester, Mass.

**LATHES, EXTENSION GAP.**

All Geared—Barnes Drill Co., Rockford, Ill.

Bridgeford Machine Tool Works, Rochester, N. Y.  
 Fay & Scott, Dexter, Me.  
 ♦ Harrington, Edwin, Son & Co., Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oliver Mfg. Co., W. W., Buffalo, N. Y.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.

**LATHES, FOOT POWER.**

Barnes Co., W. F. & John, Rockford, Ill.  
 Carroll-Jamieson Machine Tool Co., The, Batavia, O.  
 Dalton Manufacturing Corp., Sound Beach, Conn.  
 Garvin Machine Co., New York, N. Y.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Reed-Prentice Co., Worcester, Mass.  
 Star—Seneca Falls Mfg. Co., Inc., The, Seneca Falls, N. Y.  
 Shepard Lathe Co., Cincinnati, O.

**LATHES, GAP.**

National Lathe Co., Cincinnati, Ohio.  
 Putnam—Manning, Maxwell & Moore, Inc., Fitchburg, Mass.  
 Rahn-Larmon Co., The, Cincinnati, O.  
 Simplex Machine Tool Co., Cleveland, O.  
 South Bend Lathe Works, South Bend, Ind.

**LATHES, GARAGE.**

Rahn-Larmon Co., The, Cincinnati, O.

**LATHES, GEAR, QUICK CHANGE.**

South Bend Lathe Works, South Bend, Ind.

**LATHES, GEARED HEAD.**

Bradford Machine Tool Co., The, Cincinnati, Ohio.  
 National Lathe Co., Cincinnati, Ohio.  
 Putnam—Manning, Maxwell & Moore, Inc., Fitchburg, Mass.  
 Reed-Prentice Co., Worcester, Mass.

**LATHES, GUN BORING AND TURNING.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Betts Machine Co., Rochester, N. Y.  
 Johnson, I. H., Jr., Inc., Philadelphia, Pa.

**LATHES, HAND.**

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Chicago Machine Tool Co., Chicago, Ill.  
 Garvin Machine Co., The, New York, N. Y.  
 Mann, Chas. A., Providence, R. I.  
 Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.

**LATHES, INGOT SLICING.**

♦ Bethlehem Steel Co., Bethlehem, Pa.

**LATHES, JOURNAL TRUEING.**

Betts Machine Co., Inc., Rochester, N. Y.

**LATHES, MANUAL TRAINING.**

♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
 Sheldon, E. H. & Co., Muskegon, Mich.  
 South Bend Lathe Works, South Bend, Ind.

**LATHES, MANUFACTURING.**

Fulton—Fulton Machine Tool Co., Chicago, Ill.  
 Sundstrand—Rockford Tool Co., Rockford, Ill.  
 Greenlee—Greenlee Bros. & Co., Rockford, Ill.

**LATHES, METAL SPINNING.**

Bliss, E. W., & Co., Brooklyn, N. Y.  
 Grabo, E. O., New York, N. Y.  
 Meriden Machine Tool Co., The, Meriden, Conn.  
 Prybitt, P., Machine Co., Inc., New York, N. Y.  
 Toledo Machine & Tool Co., Toledo, O.  
 Waterbury-Farrell Fdy. & Mach. Co., Waterbury, Conn.

**LATHES, FIN TURNING.**

Wickes Brothers, Saginaw, Mich.

**LATHES, PRECISION.**

American Watch Tool Co., Waltham, Mass.  
 Ames, E. C., & Co., Waltham, Mass.  
 Elgin Tool Works, Elgin, Ill.  
 Faneuil Watch Tool Co., Boston, Mass.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Massachusetts Tool Co., Greenfield, Mass.  
 Rivett Lathe Mfg. Co., Brighton, District of Boston, Mass.  
 Stark Tool Co., Waltham, Mass.  
 Waltham Machine Works, Waltham, Mass.

**LATHES, PRODUCTION.**

Oliver Machinery Co., Grand Rapids, Mich.  
 Pratt & Whitney Co., Hartford, Conn.

**LATHES, PROJECTILE.**

Betts Machine Co., Rochester, N. Y.  
Johnson, I. H. Jr., Co., Inc., Philadelphia, Pa.

**LATHES, PULLEY TURNING.**

Cincinnati—Cincinnati Pulley Machinery Co., Cincinnati, Ohio.

**LATHES, ROLL.**

The Youngstown Foundry & Machine Co., Youngstown, O.

**LATHES, SCREW-CUTTING.**

Automatic Machine Co., Bridgeport, Conn.  
New Shepard, Sterling—Shepard Lathe Co., Cincinnati, O.  
Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
South Bend Lathe Works, South Bend, Ind.

**LATHES, SHORT CUT.**

Seneca Falls Mfg. Co., Inc., Seneca Falls, N. Y.

**LATHES, SPEED.**

American Tool & Machine Co., Boston, Mass.  
Blount, J. C., Co., Everett, Mass.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Builders' Iron Foundry, Providence, R. I.  
Chicago Machine Tool Co., Chicago, Ill.  
Diamond Machine Co., The, New York, N. Y.  
Garvin Machine Co., The, New York, N. Y.  
Grabo, E. O., New York, N. Y.  
Grammes, L. F., & Sons, Allentown, Pa.  
Grant Mfg. & Machine Co., Bridgeport, Conn.  
Johnson, Jr., Co., Inc., I. H., Philadelphia, Pa.  
LeBond Machine Tool Co., Cincinnati, O.  
Niles-Bement-Pond Co., New York, N. Y.  
Oliver Machinery Co., Grand Rapids, Mich.  
Sheldon, E. H. & Co., Muskegon, Mich.  
♦ Wells—Greenfield Tap & Die Corp., Greenfield, Mass.

**LATHES, SQUARE ARBOR.**

American Tool & Machine Co., Boston, Mass.  
Pratt & Whitney Co., Hartford, Conn.  
Reed-Prentice Co., Worcester, Mass.  
Ryerson, Joseph T. & Son, Chicago, Ill.  
Seneca Falls—Seneca Falls Mfg. Co., The, Seneca Falls, N. Y.  
Wells, F. E., & Son Co., Greenfield, Mass.

**LATHES, TOOL ROOM.**

Davis Machine Tool Co., Inc., Rochester, N. Y.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.  
Pratt & Whitney Co., Hartford, Conn.  
Sundstrand—Rockford Tool Co., Rockford, Ill.  
Walcott Lathe Co., Jackson, Mich.

**LATHES, TURRET.**

American Tool & Machine Co., Boston, Mass.  
American Tool Works Co., Cincinnati, O.  
Acme, Cincinnati—The Acme Machine Tool Co., Cincinnati, O.  
Bardons & Oliver, Cleveland, O.  
Bickford, H., & Co., Lakeport, N. H.  
♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
Buckeye Drill & Lathe Co., Columbus, O.  
Bullard Machine Tool Co., The, Bridgeport, Conn.  
Cincinnati—Cincinnati Lathe & Tool Co., Cincinnati, O.  
Cincinnati—The Acme Machine Tool Co., Cincinnati, O.  
Cleveland Automatic Machine Co., Cleveland, O.  
Colburn Machine Tool Co., Franklin, Pa.  
Cotton States Belting & Supply Co., Atlanta, Ga.  
Davis Machine Tool Co., Rochester, N. Y.  
Defiance Machine Works, Defiance, Ohio.  
Dreses Machine Tool Co., Cincinnati, O.  
Fay & Scott, Dexter, Me.  
Foster Machine Co., Elkhart, Ind.  
Fox—Gage Machine Works, Waterford, N. Y.  
Garvin Machine Co., The, New York, N. Y.  
Greenlee Bros. & Co., Rockford, Ill.  
Gisholt Machine Co., Madison, Wis.  
Gridley, National—Acme Co., Cleveland, O.  
Hartness, Flat Turret, Fay—Jones & Lamson Machine Co., Springfield, Vt.  
Herbert—Alfred Herbert, Ltd., New York.  
Hercules—Hercules Machine & Tool Co., Inc., New York, N. Y.  
International Machine Tool Co., Indianapolis, Ind.  
Johnson, Jr., Co., Inc., I. H., Philadelphia, Pa.  
Jones & Lamson Machine Co., Springfield, Vt.  
Le Blond—R. K. Le Blond Machine Tool Co., Cincinnati, Ind.  
Libby—The International Machine Tool Co., Indianapolis, Ind.  
Lodge & Shipley Machine Tool Co., Cincinnati, O.  
Meriden Machine Tool Co., The, Meriden, Conn.  
Milholland—Milholland Machine Co., Indianapolis, Ind.  
New Britain Machine Co., New Britain, Conn.

Niles-Bement-Pond Co., New York, N. Y.  
Oliver Machinery Co., Grand Rapids, Mich.  
Porter Cable Machine Co., Syracuse, N. Y.  
Potter & Johnston Machine Co., Pawtucket, R. I.  
Pratt & Whitney Co., Hartford, Conn.  
Quint, A. D., Hartford, Conn.  
Rahn—The Rahn-Larmon Co., Cincinnati, O.  
Reed-Prentice Co., Worcester, Mass.  
Ryerson-Conradson—Conradson Machine Tool Co., Green Bay, Wis.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
Simpli—Allen & Curtiss Co., Mishawaka, Ind.  
Smurr & Kamen Machine Co., Chicago, Ill.  
Springfield Machine Tool Co., The, Springfield, O.  
Stark Tool Co., Waltham, Mass.  
Steinie Turret Machine Co., Madison, Wis.  
Tilted Turret—Wood Turret Machine Co., Brazil, Ind.  
Warner & Swasey Co., The, Cleveland, O.  
Wood Turret Machine Co., Brazil, Ind.

**LATHES, UNIVERSAL, HOLLOW, HEXAGON.**

♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
♦ Partridge—E. O. Partridge, Chicago, Ill.  
Warner & Swasey Co., Cleveland, O.

**LATHES, WOOD TURNING.**

American Saw Mill Mach'y Co., Hackettstown, N. J.  
Badger Gas & Gasoline Engine Co., Kansas City, Kans.  
Baird Machinery Co., The, Oakville, Conn.  
Barnes, W. F. & John, Co., Rockford, Ill.  
Booth's—Loetzer Valve & Hydrant Co., Monroeton, Pa.  
Empire Machine Works, Mt. Morris, N. Y.  
Estes, E. B., & Sons, New York, N. Y.  
Fay & Scott, Dexter, Me.  
Goodell, Companion—Millers Falls Co., New York, N. Y.  
Jones—Huntsville Foundry & Machine Co., Huntsville, Ala.  
Kline, Lewis T., Alpena, Mich.  
Klotz Machine Co., Sandusky, O.  
Little Giant—Little Giant Co., Mankato, Minn.  
Magna Machine Co., Brooklyn, N. Y.  
Mattison, C., Machine Works, Rockford, Ill.  
Noble Machine Co., Ft. Wayne, Ind.  
Ober Mfg. Co., Chagrin Falls, O. (handle & spoke).  
♦ Oliver Machinery Co., Grand Rapids, Mich.  
♦ Partridge—E. O. Partridge, Chicago, Ill.  
Pringle & Brode Machinery Co., Chicago, Ill.  
Sanders—Ober Mfg. Co., Chagrin Falls, O.  
Seneca Falls—Seneca Falls Mfg. Co., The, Seneca Falls, N. Y.  
South Bend Lathe Works, South Bend, Ind.  
Standard—Lewis R. Ripley, Harvard, Mass.  
Trevor Mfg. Co., Lockport, N. Y.  
Variety—Loetzer Valve & Hydrant Co., Monroeton, Pa.  
Waymoth—Waymoth & Co., A. D., Fitchburg, Mass.  
Yates, P. B., Machine Co., Beloit, Wis.

**LATHES, WRAPPING.**

Allen Machine Co., Erie, Pa.

**LATHES AND CLOSETS.**

American—American Warming & Ventilating Co., Elmira, N. Y.  
Crane Co., Chicago, Ill.  
P. H. Ma Girl Foundry & Furnace Works, Bloomington, Ill.  
Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
Privus, Solus—The J. L. Mott Iron Works, Trenton, N. J.  
Sanitas—Sanitas Mfg. Co., Boston, Mass.

**LAVA BURNERS AND TIPS.**

(See "Burners, Gas.")

**LAVATORIES, BARBERS.**

Belmont, Verdia, Carlton—The J. L. Mott Iron Works, Trenton, N. J.  
Crane Co., Chicago, Ill.  
Cumberland—The J. L. Mott Iron Works, Trenton, N. J.  
Elger Co., Cameron, W. Va.  
Excelsior, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Kohler—Kohler Co., Kohler, Wis.  
Madonis—Thos. Maddock's Sons Co., Trenton, N. J.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Tepeco—Trenton Potteries Co., Trenton, N. J.  
Union Sanitary Works, Noblesville, Ind.  
Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

**LAVATORIES, BATTERY.**

Kohler—Kohler Co., Kohler, Wis.  
Tepeco and Two Fired—Trenton Potteries Co., Trenton, N. J.

**LAVATORIES, CORNER, ONE OR TWO LEGS AND WALL HANGING.**

Thomas Maddock's Sons Co., Trenton, N. J.  
Weiskittel, A., & Son Co., Baltimore, Md.

**LAVATORIES, DENTAL.**

Cahill—The Cahill Iron Works, Chattanooga, Tenn.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 J. L. Mott Iron Wks., Trenton, N. J., Trade names—Altoona, Bedford, Crescent, Norwalk, Tremont.  
 Kohler Co., Kohler, Wis.  
 Thomas Maddock's Sons Co., Trenton, N. J.  
 Two Fired—Trenton Potteries Co., Trenton, N. J.

**LAVATORIES OR BOWLS, FACTORY.**

Gaylord—Gaylord Sanitary Mfg. Co., El Dorado, Kans. (Automatic.)  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Thomas Maddock's Sons Co., Trenton, N. J.  
 Manufacturing Equipment & Eng. Co., Framingham, Mass.  
 Nelson, N. O. Mfg. Co., St. Louis, Mo.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Tepeco and Two Fired—Trenton Potteries Co., Trenton, N. J.  
 Union Sanitary Works, Noblesville, Ind.

**LAVATORIES, FOLDING.**

Albany, Arco, Arlington—A. B. Sands & Son Co., New York, N. Y.  
 Bishop's—William Bishop's Sons, Brooklyn, N. Y.  
 Clinton, Croton, Geneva, Glenwood—A. B. Sands & Son Co., New York, N. Y.  
 Hampton, Mail Car—The J. L. Mott Iron Works, Trenton, N. J.  
 Hobron, Kingston—A. B. Sands & Son Co., New York.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 Olympus, Roslyn, Utility—A. B. Sands & Son Co., New York, N. Y.

**LAVATORIES, HOSPITAL.**

Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Crane Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Meyer-Sniffen Co., The, New York, N. Y.  
 Monument Pottery Co., Trenton, N. J.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Tepeco and Two Fired—Trenton Potteries Co., The, Trenton, N. J.  
 Wolff Mfg. Co., Chicago, Ill.

**LAVATORIES, MANICURE, PORCELAIN.**

Arden, Ardmore, Norma, Newport—J. L. Mott Iron Works, Trenton, N. J.

**LAVATORIES, MARBLE TOP.**

Agate—James B. Clow & Sons, Chicago, Ill.  
 Alexander, Argie—F. N. Dubois & Co., New York.  
 Bedford, Brooks—F. N. Dubois & Co., New York.  
 Brookville—Jenkins Mfg. Co., New York, N. Y.  
 Colonial—James B. Clow & Sons, Chicago, Ill.  
 Concord—The Peck Bros. & Co., New Haven, Conn.  
 Croton—F. N. Dubois & Co., New York, N. Y.  
 Denmark—Jenkins Mfg. Co., New York, N. Y.  
 Dorchester—Jenkins Mfg. Co., New York, N. Y.  
 Dorothy—F. N. Dubois & Co., New York, N. Y.  
 Dover—Jenkins Mfg. Co., New York, N. Y.  
 Dubois—F. N. Dubois & Co., New York, N. Y.  
 Duovla—Federal-Huber Co., Chicago, Ill.  
 Eclipse—The Peck Bros. & Co., New Haven, Conn.  
 Gilsey—F. N. Dubois & Co., New York, N. Y.  
 Josephine—F. N. Dubois & Co., New York, N. Y.  
 Lenox—The Peck Bros. & Co., New Haven, Conn.  
 Marmol—James B. Clow & Sons, Chicago, Ill.  
 McCambridge Co., Philadelphia, Pa.  
 Meyer-Sniffen Co., The, New York, N. Y.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Newport—The Peck Bros. & Co., New Haven, Conn.  
 Pedarra—F. N. Dubois & Co., New York, N. Y.  
 Prospect—F. N. Dubois & Co., New York, N. Y.  
 Renaissance—James B. Clow & Sons, Chicago, Ill.  
 Renaissance—The J. L. Mott Iron Works, Trenton, N. J.  
 Rossmore—F. N. Dubois & Co., New York, N. Y.  
 Sanitas, Crescent, Crown, Easton, Empire, Hanover, Premier—Sanitas Mfg. Co., Boston, Mass.  
 Tremont—The Peck Bros. & Co., New Haven, Conn.  
 Vernon—F. N. Dubois & Co., New York, N. Y.  
 Willis—F. N. Dubois & Co., New York, N. Y.  
 Wolff's Standard—Wolff Mfg. Co., Chicago, Ill.  
 Yankee—The Peck Bros. & Co., New Haven, Conn.

**LAVATORIES, PORCELAIN.**

(For list of potteries, see "Earthenware, Sanitary.")

Adelphi—The Peck Bros. & Co., New Haven, Conn.  
 Albarie—The Peck Bros. & Co., New Haven, Conn.  
 Angola—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Arcadia—The Peck Bros. & Co., New Haven, Conn.  
 Arcata—Eljer Co., Cameron, W. Va.  
 Belvedere, Berkeley—The Peck Bros. & Co., New Haven, Conn.

Bryant—The Peck Bros. & Co., New Haven, Conn.  
 Cambridge—The Peck Bros. & Co., New Haven, Conn.  
 Camden Pottery Co., Camden, N. J.  
 Chester—The Peck Bros. Co., New Haven, Conn.  
 Colona, Coptic, Coronet, Empress—Crane Co., Chicago, Ill.  
 Dececo—The Dececo Co., Boston, Mass.  
 Duchess—Haines, Jones & Cadbury Co., Philadelphia.  
 Du Bois, F. N., & Co., Inc., The, New York, N. Y.  
 Trade names—Berwick, Columbus, Edgcomb, Jefferson, Jerome, Lafayette, Lennox, Lexington, Manhattan, Reliance, Vernon, Willis, Du Bois.  
 Easton—A. B. Sands & Son Co., New York, N. Y.  
 Eureka—Cochran, Drugan & Co., Trenton, N. J.  
 Fords Porcelain Works, Perth Amboy, N. J.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Iadila—Crane Co., Chicago, Ill.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 Industrial—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Johnson, J. D. Co., Inc., Philadelphia, Pa. Trade names—Columbia, Continental, Cortland, Hoffman, Krupp, Maxim, Mignon, Nustile, Oxford, Prudential, Remington, Ritz, Carlton, Ronjo, Saxon, Stratford, Wenonah.  
 Lavatories Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 McCambridge Co., Philadelphia, Pa.  
 Manhattan—The Peck Bros. & Co., New Haven, Conn.  
 Mohican—Monument Pottery Co., Trenton, N. J.  
 Montclair—Eljer Co., Cameron, W. Va.  
 Norma—A. B. Sands & Son Co., New York, N. Y.  
 Mott, J. L., Iron Works, Trenton, N. J. Trade names—Altoona, Bay State, Claremont, Clinton, Marsden, Norwalk, Valando, Volney, Vulcan, Valcour.  
 Pacific Porcelain Ware Co., San Francisco, Cal.  
 Pacific Sanitary Mfg. Co., San Francisco, Cal.  
 Plymouth—Crane Co., Chicago, Ill.  
 Princess—The Peck Bros. & Co., New Haven, Conn.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia.  
 Rococo—The Peck Bros. & Co., New Haven, Conn.  
 Strathmore—The Peck Bros. & Co., New Haven, Conn.  
 Terminal—Monument Pottery Co., Trenton, N. J.  
 Trojan—Aird-Don Co., Troy, N. Y.  
 Vernon—Crane Co., Chicago, Ill.  
 Waldorf—The Peck Bros. & Co., New Haven, Conn.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Wolff Mfg. Co., Chicago, Ill. Trade names—Astoria, Norfolk, Pacific, Terminal, Bellevue.

**LAVATORIES, PORCELAIN ENAMELED.**

(Founders and Enamellers.)

Barnes Mfg. Co., Mansfield, O.  
 Clow, James B. & Sons, Chicago, Ill.  
 Federal-Huber Company, Chicago, Ill.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Improved Sanitary Fixture Co., Los Angeles, Cal.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler Co., Sheboygan, Wis.  
 Louis Lipp Co., The, Cincinnati, Ohio.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 National Sanitary Co., The, Salem, O.  
 Nelson, N. O. Mfg. Co., St. Louis, Mo.  
 Pacific Porcelain Ware Co., San Francisco, Cal.  
 Richmond—Richmond Radiator Co., New York.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Washington Iron Works, Los Angeles, Cal.  
 Weiskittel & Son Co., A., Baltimore, Md.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Wolff Mfg. Co., Chicago, Ill.

(Trade names used by jobbers and manufacturers.)

Abronia—The National Sanitary Co., Salem, O.  
 Agnes—Haines, Jones & Cadbury Co., Philadelphia.  
 Ajax—United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Alamo—The Humphreys Mfg. Co., Mansfield, O.  
 Alberta-Ajax—United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Alpine—The National Sanitary Co., Salem, O.  
 Althea—The National Sanitary Co., Salem, O.  
 Alto—The Humphreys Mfg. Co., Mansfield, O.  
 Alyssum—The National Sanitary Co., Salem, O.  
 American Enamel Mfg. Corp., Elizabeth, N. J.  
 Ameritin—American Tin & Terne Plate Co., Philadelphia, Pa.  
 Antoinette—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Ariadne—Haines, Jones & Cadbury Co., Philadelphia.  
 Asperula—The National Sanitary Co., Salem, O.  
 Avalon, Avino—The Humphreys Mfg. Co., Mansfield, Ohio.  
 Azalia—The National Sanitary Co., Salem, O.  
 Aztec—The Humphreys Mfg. Co., Mansfield, O.  
 Balfour, Barclay—The J. L. Mott Iron Works, Trenton, N. J.  
 Barbara—Haines, Jones & Cadbury Co., Philadelphia.



Bartonla—The National Sanitary Co., Salem, O.  
 Belden—The J. L. Mott Iron Works, Trenton, N. J.  
 Berkshire—Crane Co., Chicago, Ill.  
 Beverly—The J. L. Mott Iron Works, Trenton, N. J.  
 Bonita—The Humphryes Mfg. Co., Mansfield, O.  
 Bristol, Brockton, Bromley, Bulwer—The J. L. Mott Iron Works, Trenton, N. J.  
 Browallia, Bryonia—National Sanitary Co., The, Salem, O.  
 Camelia—The National Sanitary Co., Salem, O.  
 Canna—The National Sanitary Co., Salem, O.  
 Carcel—The Humphryes Mfg. Co., Mansfield, O.  
 Caroline—Haines, Jones & Cadbury Co., Philadelphia.  
 Catalina—The Humphryes Mfg. Co., Mansfield, O.  
 Cecilia—Haines, Jones & Cadbury, Philadelphia, Pa.  
 Celosia—The National Sanitary Co., Salem, O.  
 Colonial—The Dececo Co., Boston, Mass.  
 Cordelia, Corinna—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Cornelia—Haines, Jones & Cadbury Co., Philadelphia.  
 Cosmos—The National Sanitary Co., Salem, O.  
 Crane Co., Chicago, Ill. Trade names—Ardmore, Avola, Canton, Chatham, Closin, Dayton, Eaton, Oakley, Royal, Rugby, Savoy, Shandon, Stafford, Wilton, Boylston, Cambridge Cecil, Coptic, Crescent, Fairfax, Kent, Nevada, Norfolk, Nutley, Regent, Rocco.  
 Datura—The National Sanitary Co., Salem, O.  
 Dececo—The Dececo Co., Boston, Mass.  
 Dianthus—The National Sanitary Co., Salem, O.  
 Doncella—The Humphryes Mfg. Co., Mansfield, O.  
 Dora—Haines, Jones & Cadbury Co., Philadelphia.  
 Du Bois, F. N., & Co., Inc., The, New York, N. Y. Trade names—Alexander, Argyle, Bedford, Brooks, Croton, Dorothy, Gilsey, Josephine, Pedarar, Prospect, Rosmore.  
 Ebinger, D. A., Sanitary Mfg. Co., Columbus, O.  
 Edith—Haines, Jones & Cadbury Co., Philadelphia.  
 Elinor, Elizabeth—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Emily—Haines, Jones & Cadbury Co., Philadelphia.  
 Esther, Ethel—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Etna—Jenkins Mfg. Co., New York, N. Y.  
 Eulalia—The Humphryes Mfg. Co., Mansfield, O.  
 Eunice, Evangeline—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Florence—Haines, Jones & Cadbury Co., Philadelphia.  
 Genesee—Federal-Huber Co., Chicago, Ill.  
 Gothic—United States Sanitary Mfg. Co., Pittsburgh.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Harrow—Hartford—Crane Co., Chicago, Ill.  
 Helena—Haines, Jones & Cadbury Co., Philadelphia.  
 Hidalgo, Hospital—The Humphryes Mfg. Co., Mansfield, O.  
 Janet—Haines, Jones & Cadbury Co., Philadelphia.  
 Johnson, J. D., Co., Inc., Philadelphia, Pa. Trade names—Adelphi, Akron, Ashland, Baldwin, Bergen, Berkeley, Bushwick, Camden, Crown, Colon, Corona, Danube, Dayton, Defiance, Delaware, Devon, Ditmas, Doric, Dorrance, Edison, Elbe, Elliott, Ellsworth, Emerson, Erie, Eton, Hydro-Dental, Inwood, Kensington, Linden, McIlvaine, Narberth, Neponsit, Olympia, Pittsburgh, Pokal, Princeton, Prudent, Rival, Seneca, Sylvan.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler Co., Kohler, Wis. Trade names—Baroness, Columbia, Filmore, Belmore, Stanmore, Emmet, Esmond, Bretton, Narobol, Kohler, Superior, Kenneth, Bevo.  
 Lado—The Humphryes Mfg. Co., Mansfield, O.  
 Lena—Haines, Jones & Cadbury Co., Philadelphia.  
 Leonora, Lillian—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Liberty—The Humphryes Mfg. Co., Mansfield, O.  
 Lima, Limpia—The Humphryes Mfg. Co., Mansfield, O.  
 Louise—Haines, Jones & Cadbury Co., Philadelphia.  
 Lucero—The Humphryes Mfg. Co., Mansfield, O.  
 Lucretia—Haines, Jones & Cadbury Co., Philadelphia.  
 Luzon—The Humphryes Mfg. Co., Mansfield, O.  
 McCambridge Co., Philadelphia, Pa.  
 Madeline—Haines, Jones & Cadbury Co., Philadelphia.  
 Manila—The Humphryes Mfg. Co., Mansfield, O.  
 Marton—Haines, Jones & Cadbury Co., Philadelphia.  
 Mildred—Haines, Jones & Cadbury Co., Philadelphia.  
 Minosa—The National Sanitary Co., Salem, O.  
 Muriel—Haines, Jones & Cadbury Co., Philadelphia.  
 Nigella—The National Sanitary Co., Salem, O.  
 Ophelia—Haines, Jones & Cadbury Co., Philadelphia.  
 Osage, Oswego—Federal-Huber Co., Chicago, Ill.  
 Paloma—The Humphryes Mfg. Co., Mansfield, O.  
 Pansy—The National Sanitary Co., Salem, O.  
 Patopoco, Pawtucket—Federal-Huber Co., Chicago, Ill.  
 Petunia—The National Sanitary Co., Salem, O.  
 Primrose—The National Sanitary Co., Salem, O.  
 Princeton—Jenkins Mfg. Co., New York, N. Y.  
 Priscilla—Haines, Jones & Cadbury Co., Philadelphia.  
 Richmond—Richmond Radiator Co., New York, N. Y.  
 Rincon—The Humphryes Mfg. Co., Mansfield, O.  
 Rosalind—Haines, Jones & Cadbury Co., Philadelphia.  
 Rowe—Rowe Sanitary Lavatory Co., Detroit, Mich.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Sacramento, Sabin, Salmon, Sante—Federal-Huber Co., Chicago, Ill.

Sanitas Mfg. Co., Boston, Mass. (Trade names—Crescent, Bristol, Caldwell, Arlington, Trinity, Premier, Mignon, Marlboro, Exeter, Faneuil, Grafton, Dartmouth, Beacon, Newbury, Standish, Easton, Winthrop.)  
 Scioto—Federal-Huber Co., Chicago, Ill.  
 Senora—The Humphryes Mfg. Co., Mansfield, O.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa. Trade names—Aida, Alcove, Aloxe, Alva, Andor, Angle, Anona, Antole, Arcadia, Arion, Armada, Athens, Avoy, Belmont, Berlin, Beverly, Calyx, Charo, Chelsea, Colart, Copley, Coptar, Crescent, Dallas, Delos, Delphi, Diva, Duo, Eaton, Edgemore, Elmore, Everett, Kenroyd, Lavella, Lenox, Lindell, Lindell Battery, Lorna, Lorna Battery, Marlowe, Melrose, Merlin, Narova, Nassau, Marco, Navarre, Navitor, Nestor, Neva, Newort, Odonia, Omar, Ophir, Elston Battery, Opine, Opine Battery, Ortho, Othello, Othello Battery, Oxford, Pandora, Pasco, Pelona, Penza, Prentill, Penco, Penning, Prison, Ralwon, Raymor, Romane, Santor, Saxon, Selwyn, Severn, Standish, Sylvanus, Tavora, Telamon, Telton, Teora, Thalia, Thames, Tolva, Tonsorial, Tudor, Tyrol, Vardo, Vassar, Vera, Volant, Valpo, Yale, Idalia, Janeiro, Miner, Talbot, Tula, Bartol, Argus, Braceton, Bangor, Belair, Blackford, Brampton, Buene, Carmen, Calyx, Caslon, Carleton, Chantry, Elston, Fenwick, Ferma, Gasco, Grassmere, Harcourt, Hibben, Iola, Iris, Chelsea, Lenox, Clinic, Lucerne, Mayco, Merchant, Milady, Newinn, Nubia, Randall, Santos, Trafton, Venton, Vincent, Pelton, Woodman.  
 Staunton—Kohler Co., Kohler, Wis.  
 Sylvia—Haines, Jones & Cadbury Co., Philadelphia.  
 Tepic—The Humphryes Mfg. Co., Mansfield, O.  
 Toltec—The Humphryes Mfg. Co., Mansfield, O.  
 Verona—The Peck Bros. & Co., New Haven, Conn.  
 Victress—Haines, Jones & Cadbury Co., Philadelphia.  
 Viola—Haines, Jones & Cadbury Co., Philadelphia.  
 Weiskittel & Son Co., A., Baltimore, Md.  
 Western—Washington Iron Works, Los Angeles, Cal.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va. (Trade names—Daphne, Hra, La Verne, Lucile, Lynette, Milo, Niobe, Riverside, Sorela.)  
 Wisconsin—Federal-Huber Co., Chicago, Ill.  
 Wolf Mfg. Co., Chicago, Ill. Trade names—Aberdeen, Alameda, Alpina, Argyle, Austin, Avon, Avondale, Clinton, Essex, Harrison, Jackson, Madison, Newton, Ohio, Afton, Norwood, Concord, Sheldon.  
**LAVATORIES, PORTABLE.**  
 Ro-San—Rowe Sanitary Mfg. Co., Detroit, Mich.  
**LAVATORIES, PRISON.**  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Great Western Pottery Co., The, Kokomo, Ind.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler Co., Kohler, Wis.  
 Leavenworth—Federal-Huber Co., Chicago, Ill.  
 Madcell—Thomas Maddock's Sons Co., Trenton, N. J.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Two-Fired—Trenton Potteries Co., Trenton, N. J.  
**LAVATORIES, RAILWAY CAR.**  
 Dayton, Mfg. Co., The, Dayton, Ohio.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Watrous—The Watrous Co., Chicago, Ill.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
**LAVATORIES, SHIP AND YACHT.**  
 Camden Potteries Co., The, Camden, N. J.  
 Curtiss—J. H. Curtiss Co., New York, N. Y.  
 Darby, Delaware, Eclipse, Fulton, Glencoe, Hapton—A. B. Sands & Son Co., New York, N. Y.  
 Jefferson—Camden Pottery Co., Camden, N. J.  
 Lenox, Lynn, Macon—A. B. Sands & Son Co., New York, N. Y.  
 Mystic—A. B. Sands & Son Co., New York, N. Y.  
 Pavo, Puritan, Salem, Savoy, Saxon, Sunset, Syria, Taunton, Troy, Warren, Warts—A. B. Sands & Son Co., New York, N. Y.  
 Puritan—Camden Pottery Co., Camden, N. J.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
**LAVATORIES, SLATE.**  
 Alpha Slate Co., The, Bangor, Pa.  
**LAVATORIES, VITREOUS CHINA.**  
 (For List of Potteries, see "Earthenware, Sanitary.")  
 Trade names used by jobbers and manufacturers.  
 Acme—The John Douglas Co., Cincinnati, O.  
 Adams—Camden Pottery Co., Camden, N. J.  
 Ashland—Jenkins Mfg. Co., New York, N. Y.  
 Atlanta—Haines, Jones & Cadbury Co., Philadelphia.  
 Augusta—Haines, Jones & Cadbury Co., Philadelphia.  
 Aura—Jenkins Mfg. Co., New York, N. Y.



Bellemeade Line—The Trenton Potteries Co., Trenton, N. J.  
 Beverly—Jenkins Mfg. Co., New York, N. Y.  
 Blackstone—Monument Pottery Co., Trenton, N. J.  
 Bloom Mixer & Integral Spout—Bloom Flusher Co., Tiffin, O.  
 Boston—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Bristol—A. B. Sands & Son Co., New York, N. Y.  
 Camden—Camden Pottery Co., Camden, N. J.  
 Capoco—Camden Pottery Co., Camden, N. J.  
 Ceylon—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Chester—A. B. Sands & Son Co., New York, N. Y.  
 Chicago Pottery Co., Chicago, Ill.  
 Circe—Haines, Jones & Cadbury Co., Philadelphia.  
 Clay—Camden Pottery Co., Camden, N. J.  
 Clinton—Jenkins Mfg. Co., New York, N. Y.  
 Crane Co., Chicago. Trade names—Albus, Argyle, Berwyn, Beverly, Dentus, Brevis, Clermont, Revere, Rondo, Fuller, Whitney, Athenian, Colona, Cottage, Crown, Dental, Diana, Eldorado, Elegia, Elmo, Idalia, Kenwood, Neola, Nova, Oratus, Roselle, Vernon.  
 Diana—Haines, Jones & Cadbury Co., Philadelphia.  
 Doric, Drexel—Crane Co., Chicago, Ill.  
 Douglas, John Co., The Cincinnati, O.  
 Ebinger, D. A., Sanitary Mfg. Co., The Columbus, O.  
 Eljer Co., Cameron, W. Va. Trade names—Adrian, Alma, Ainslee, Bellaire, Blenheim, Buffalo, Beaumont, Comfort, Cunard, Euclid, Bridgeport, Detroit, Elsinor, Guernville, Indiana, Prison, Joliet, Prison, Maywood, Morrison, St. Paul, Prison, St. Louis, Prison, Statler.  
 Factor—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Federal—Camden Pottery Co., Camden, N. J.  
 Florentine Pottery Co., Cambridge, O.  
 Forrest Ridge—Camden Pottery Co., Camden, N. J.  
 Franklin—Camden Pottery Co., Camden, N. J.  
 Gasco—Federal-Huber Co., Chicago, Ill.  
 Grant—Camden Pottery Co., Camden, N. J.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hajoca Oval—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hanover—A. B. Sands & Son Co., New York, N. Y.  
 Harvard—A. B. Sands & Son Co., New York, N. Y.  
 Hebe—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Impervio—The Trenton Potteries Co., Trenton, N. J.  
 Iona—Jenkins Mfg. Co., New York, N. Y.  
 Jamesebcar—John A. Murray & Co., New York, N. Y.  
 Jefferson—Camden Pottery Co., Camden, N. J.  
 Johnson, J. D., Co., Philadelphia, Pa. Trade names—Anaconda, Anglo, Arcady, Clotide, Columbia, Colonial, Concord, Crown, Dental, Dresden, Drexel, Druid, Dwight, Galen-Hall, Grotto, Harvard, Minerva, Nustile, Powelton, Primrose, Prudent, Purity, Ronjo, Rival, Samaritan, Saxon, Seenev, St. Denis, Terminal, Tonsorio, Vanity, Victor, Vigilant, Waterbury, Yale.  
 Juno—Haines, Jones & Cadbury Co., Philadelphia.  
 Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Kirkwood—Jenkins Mfg. Co., New York, N. Y.  
 Kittery—A. B. Sands & Son Co., New York, N. Y.  
 Kokomo Sanitary Pottery Co., Kokomo, Ind.  
 Lakegood—Jenkins Mfg. Co., New York, N. Y.  
 Lake Montrose—Camden Pottery Co., Camden, N. J.  
 Lake Montrose, Plymouth—Camden Pottery Co., Camden, N. J.  
 Lincoln—Camden Pottery Co., Camden, N. J.  
 McCambridge Co., Philadelphia, Pa.  
 Maddock's, Thos., Sons Co., Trenton, N. J. Trade names—Madelphi, Madrid, Madalade, Madosie, Madnatic, Madidor, Madriatic.  
 Madison, Majestic, Martins—A. B. Sands & Son Co., New York, N. Y.  
 Marion—Haines, Jones & Cadbury, Philadelphia, Pa.  
 Milford—A. B. Sands & Son Co., New York, N. Y.  
 Model, Modern, Monarch—The John Douglas Co., Cincinnati, O.  
 Mott, J. L., Iron Works, Trenton, N. J. (Trade names—Altoona, Valanda, Velasco, Valcour, Vermont, Vidal, Vassar, Veritas, Vega, Vernon, Victor, Villard, Vulcan, Valroy.)  
 Mount Vernon—Camden Pottery Co., Camden, N. J.  
 Munroe—Camden Pottery Co., Camden, N. J.  
 Neptune—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Norton—Jenkins Mfg. Co., New York, N. Y.  
 Pacific—Pacific Porcelain Ware Co., San Francisco, Cal.  
 Pallas—Haines, Jones & Cadbury Co., Philadelphia.  
 Peck Bros. & Co., The, New Haven, Conn. Trade names—Baroness, Economy, Cambridge, Luxury, Oakwood, Greenwood, Edgewood, Glenwood, Manhattan, Rosevelt, Lilliputian, Beaux, Wagner, Dutchess.  
 Penn Pottery Co., Philadelphia, Pa.  
 Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y. Trade names—Pierce, Biltmore, Bancroft, Belmont, Belleclaire, Bellevue, Barton, Hospital.  
 Philadelphia—Camden Pottery Co., Camden, N. J.  
 Plaza, Colonial—Camden Pottery Co., Camden, N. J.  
 Prosperine—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Puritan—Camden Pottery Co., Camden, N. J.

Sanitas Mfg. Co., Boston, Mass. (Trade names—Arlington, Bristol, Beacon, Trinity, Crescent, Premier, Caldwell, Mignon, Marlboro, Exeter, Faneuil, Grafton, Dartmouth, Newbury, Standish, Winthrop.)  
 SESCO—The Sanitary Earthenware Specialty Co., Trenton, N. J.  
 Sidney, Puro—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Spartan, Standard—The John Douglas Co., Cincinnati.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.  
 Standard Sanitary Pottery Co., Elizabeth, N. J.  
 Tyler—Camden Pottery Co., Camden, N. J.  
 Two Fired—Trenton Potteries Co., Trenton, N. J.  
 Universal—Universal Sanitary Mfg. Co., New Castle, Pa.  
 Vitreo—Haines, Jones & Cadbury Co., Philadelphia.  
 Walls, Owen & Stambach Co., Philadelphia, Pa. Trade names—Hamilton, Logan, Noble, Overbrook, Willow.  
 Weymouth—Jenkins Mfg. Co., New York, N. Y.  
 Winthron—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill. Trade names—Blackstone, Varna, Vienna, Vendome, Viking, Virginia, Vannet, Valencia, Vedanta, Valona, Varella, Valletta, Velino, Valeria, Crown, Rialto, Wolff's.  
 Wooster Sanitary Co., Clarksburg, W. Va.

## LEAD, ANTIMONIAL.

Biggsby Metals Co., The, Cleveland, O.  
 Union Smelting & Refining Co., Inc., Newark, N. J.

## LEAD, ANTIMONIAL, BLOCK, RIBBON, WIRE.

Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Eagle-Picher Lead Co., The, Cincinnati, O.  
 Lissberger, Marks & Son, Inc., Long Island City, N. Y.  
 Union Smelting & Refining Co., Inc., Newark, N. J.

## LEAD, CAULKING.

American Smelters Securities Co., San Francisco, Cal.  
 Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 Lucky Strike—The Bibby Metals Co., Cleveland, O.  
 National Lead Co., New York, N. Y.  
 Union Smelting & Refining Co., Newark, N. J.  
 United Lead Co., St. Paul, Minn.  
 United Lead Co., New York, N. Y.

## LEAD, GLAZIERS'.

Bogue-Wensley Lead Co., The, Denver, Colo.  
 Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Chadwick-Boston Lead Co., Boston, Mass.  
 Eagle-Picher Lead Co., The, Cincinnati, O.  
 Gardiner Metal Co., Chicago, Ill.  
 National Lead Co., New York, N. Y.  
 Northwest Lead Co., Seattle, Wash.  
 Raymond Lead Works, Chicago, Ill.  
 Robertson Lead Co., James, Baltimore, Md.  
 Rochester Lead Works, Rochester, N. Y.  
 United Lead Co., St. Paul, Minn.  
 United Lead Co., New York, N. Y.  
 Windsor Mfg. Co., Milwaukee, Wis.

## LEAD, PIG, BAR AND INGOT.

American Smelters Securities Co., San Francisco, Cal.  
 American Smelting & Refining Co., New York, N. Y.  
 American Zinc, Lead & Smelting Co., Boston, Mass.  
 Atlantic Iron & Metal Co., Cleveland, O.  
 Biggsby Metals Co., The, Cleveland, O.  
 Birkenstein, S. & Sons, Inc., Chicago, Ill.  
 Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Brady Brass Co., Jersey City, N. J.  
 Brewer Smelting & Refining Co., Cincinnati, O.  
 Bruce & Cook, New York, N. Y.  
 Canfield & Sons Co., M. C., Newark, N. J.  
 Charleston Lead Works, Charleston, S. C.  
 Columbia Smelting & Refining Co., New York, N. Y.  
 Detroit Lead Pipe Works, Detroit, Mich.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Du Pont, E. I., de Nemours Powder Co., Wilmington, Del.  
 Eagle-Picher Lead Co., The, Cincinnati, O.  
 Eagle Smelting & Refining Works, New York.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Gilbert, A. & Sons Brass Foundry Co., St. Louis, Mo.  
 Great Smelting & Refining Co., Chicago, Ill.  
 Hartman Ingot Metal Co., Chicago, Ill.  
 Illinois Smelting & Refining Co., Chicago, Ill.  
 Lawrence Shot & Lead Co., Omaha, Neb.  
 Lehman Bros., Hoboken, N. J.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 Michigan Smelting & Refining Co., Detroit, Mich.  
 National Lead Co., New York, N. Y.  
 North American Copper Co., New York, N. Y.  
 North American Smelting Co., Philadelphia, Pa.  
 Pennsylvania Smelting Co., Pittsburg, Pa.  
 Raymond Lead Works, Chicago, Ill.

Richards & Co., Inc., Boston, Mass. (Remelted.)  
 Robertson Lead Co., James, Baltimore, Md.  
 Rochester Lead Works, Rochester, N. Y.  
 Sandoval—Sandoval Zinc Co., Chicago, Ill.  
 Standard Smelting & Refining Co., New York, N. Y.  
 Union Smelting & Refining Co., Newark, N. J.  
 United American Metals Corp., Brooklyn, N. Y.  
 United Lead Co., St. Paul, Minn.  
 United Lead Co., New York, N. Y.  
 U. S. A. Long Life—United Smelting & Aluminum Co., New Haven, Conn.  
 United States Reduction Co., East Chicago, Ind.  
 Wensley Metal Products Co., Denver, Colo.

**LEAD, SHEET.**

American Lead Co., Pittsburgh, Pa.  
 Bailey-Farrell Mfg. Co., Pittsburgh, Pa.  
 Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Charleston Lead Works, The, Charleston, S. C.  
 Columbia Smelting & Refining Works, New York.  
 Dubois, F. N. & Co., Inc., The, New York, N. Y.  
 Detroit Lead Pipe Works, Detroit, Mich.  
 Eagle Smelting & Refining Works, New York, N. Y.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 National Lead Co., New York, N. Y.  
 Northwest Lead Company, Seattle, Wash.  
 Raymond Lead Works, Chicago, Ill.  
 Robertson, James, Lead Co., Baltimore, Md.  
 Syracuse Smelting Works, Brooklyn, N. Y.  
 Tillinghast, L. H., Supply Co., Providence, R. I.  
 United Lead Co., St. Paul, Minn.  
 United Lead Co., New York, N. Y.

**LEAD, SILVER.**

Asbury Graphite Mills, Asbury, N. J.

**LEAD, SOUNDING.**

Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Chadwick-Boston Lead Co., Boston, Mass.  
 Seattle Brass Co., Seattle, Wash.  
 Willcox, Crittenden & Co., Middletown, Conn.

**LEAD, TEMPERING.**

Lewis, John, & Bros. Co., Baltimore, Md.

**LEAD, WHITE AND RED.**

American Seal—The Wm. Connors Paint Mfg. Co., Troy, N. Y.  
 Boston Star—Chadwick-Boston Lead Co., Boston.  
 Carter—Carter White Lead Co., Chicago, Ill.  
 Dutch Boy—National Lead Co., New York, N. Y.  
 Eagle-Picher Lead Co., The, Cincinnati, O.  
 Forest River—Chadwick-Boston Lead Co., Boston.  
 Hammar Bros. White Lead Co., St. Louis, Mo.  
 United Lead Co., New York, N. Y.  
 Wadsworth-Howland Co., Boston, Mass.

**LEAD WOOL.**

Bunker Hill—Northwest Lead Co., Seattle, Wash.  
 Eagle-Picher Lead Co., The, Cincinnati, O.  
 Hoyt Metal Co., St. Louis, Mo.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 New York Lead Wool Co., New York, N. Y.  
 Robertson, James, Lead Co., Baltimore, Md.  
 United Lead Co., New York, N. Y.  
 Wensley Metal Products Co., Denver, Colo.

**LEATHER, ARTIFICIAL.**

Fabrikoid—Dupont Fabrikoid Co., Wilmington, Del.

**LEATHER BELTING.**

(See "Belting, Leather.")

**LEATHER FOR BELTING AND SPECIALTIES MFGS.**

Shingle Leather Co., Philadelphia, Pa.

**LEATHERS, CRIMP.**

Adams, C. F., Ft. Worth, Texas.  
 Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Chicago Belting Co., Chicago, Ill.  
 Fieldco—R. B. Field & Co., Worcester, Mass.  
 Nott, W. S., Co., Minneapolis, Minn.

**LEATHERS, CUP AND FLANGE.**

Adams, C. F., Ft. Worth, Texas.  
 Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—L. J. Barwood Mfg. Co., Boston, Mass.  
 Black Star—C. F. Adams, Ft. Worth, Texas.  
 Chibeco—Chicago Belting Co., Chicago, Ill.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Cook, H. M., Belting Co., San Francisco, Cal.  
 Davis, John C., Rochester, N. Y.  
 Durable, Bulldog, Superior—C. F. Adams, Ft. Worth, Texas.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—R. B. Field & Co., Worcester, Mass.

Forrest City Leather Washer Co., Rockford, Ill.  
 Graton & Knight Mfg. Co., Worcester, Mass.  
 Hough Mfg. Co., The, Chas. E., Franklin, Pa.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Kendrick Valve & Washer Co., Syracuse, N. Y.  
 Ladew, Edward R., Co., Inc., Glen Cove, N. Y.  
 Marsh, Chas. W., Co., Muskegon, Mich.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Nott, W. S., Co., Minneapolis, Minn.  
 Page Belting Co., Concord, N. H.  
 Porpoise—Eastern Machinery & Equipment Co., Inc., Philadelphia.  
 Red Jacket Mfg. Co., Davenport, Ia.  
 Rockford Leather Washer Co., Rockford, Ill.  
 Sherman—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Sunset—L. P. Degen Belting Co., San Francisco, Cal.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**LEATHERS, FRICTION.**

Bickford & Francis Belting Co., Buffalo, N. Y.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Houghton's Oak, Vim—Houghton, E. F., & Co., Philadelphia, Pa.  
 Ladew, Edward R., Co., Inc., Glen Cove, N. Y.  
 Nott, W. S., Co., Minneapolis, Minn.

**LEATHER GOODS, LINEMEN'S.**

Boston Woven Hose & Rubber Co., Cambridge Mass.

**LEATHERS, HAND.**

Atlantic Mfg. Co., Wilmington, Del.  
 Chicago Rawhide Mfg. Co., The, Chicago, Ill.  
 Chicago Belting Co., Chicago, Ill.  
 California Tanning Co., St. Louis, Mo.  
 Graton & Knight Mfg. Co., The, Worcester, Mass.  
 Jewell Belting Co., Hartford, Conn.  
 Schieren—Chas. A. Schieren & Co., New York, N. Y.  
 Wheeler—F. H. Wheeler Mfg. Co., Chicago, Ill.

**LEATHERS, HYDRAULIC.**

Adams, C. F., Fort Worth, Texas.  
 Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—L. J. Barwood Mfg. Co., Boston, Mass.  
 Bonner & Barnewall, New York, N. Y.  
 Camden Iron Works, Camden, N. J.  
 Chicago Belting Co., Chicago, Ill.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Chrome—Bonner & Barnewall, Inc., New York.  
 Cross Bros. Co., Inc., Rochester, N. Y.  
 Detroit Leather Specialty Co., Inc., Detroit, Mich.  
 Duxbak—Chas. A. Schieren Co., New York, N. Y.  
 Excelsior Leather Washer Co., Rockford, Ill.  
 Fieldco—R. B. Field & Co., Worcester, Mass.  
 Graton & Knight Mfg. Co., Worcester, Mass.  
 Helvetia—Groezingers, G. Sons, Lancaster, Pa.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Kendrick Valve & Washer Co., Syracuse, N. Y.  
 Ladew, Edward R., Co., Inc., Glen Cove, N. Y.  
 National Leather Belting Co., New York, N. Y.  
 Nott, W. S., Co., Minneapolis, Minn.  
 Page Belting Co., Concord, N. H.  
 Rahmann, Geo. & Co., New York, N. Y.  
 Rantville, F. Co., Grand Rapids, Mich.  
 Rockford Leather Washer Co., Rockford, Ill.  
 Schieren, Chas. A., Co., New York, N. Y.  
 Shingle Leather Co., Philadelphia, Pa.  
 Williams & Sons, I. B., Dover, N. H.

**LEATHERS, HYDRAULIC & VALVE.**

Reliance—Chicago Belting Co., Chicago, Ill.

**LEATHER, LACE.**

(See "Lacing, Belt, Leather.")

**LEATHERS, PLUNGER.**

(See Leathers, Pump.)

Adams, C. F., Fort Worth, Texas.  
 Chicago Belting Co., Chicago, Ill.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Field, R. B., & Co., Worcester, Mass.  
 Frank Bros., New York, N. Y.  
 Rockford Leather Washer Co., Rockford, Ill.

**LEATHERS, POLISHING.**

Jewell Belting Co., Hartford, Conn.  
 Oak Hemlock—Coe & Brown Co., New Haven, Conn.

**LEATHERS, PUMP.**

Adams, C. F., Fort Worth, Tex.  
 Alexander Bros., Philadelphia, Pa.  
 Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Athol Pump Co., Athol, Mass.  
 Barwood—L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Black Polish, Reliance, Sterling—Chicago Belting Co., Chicago, Ill.  
 Bruce & Cook, New York, N. Y.  
 Chicago Well Supply Co., Chicago, Ill.  
 Cook, H. M., Belting Co., San Francisco, Cal.  
 Davis, John C., Rochester, N. Y.

- ◆ Detroit Leather Specialty Co., Inc., Detroit, Mich.
- Dynamo—W. S. Nott Co., Minneapolis, Minn.
- Erb, W. B., & Co., Chicago, Ill.
- Fieldco—E. B. Field & Co., Worcester, Mass.
- Flex-O—Cross Bros. Co., Rochester, N. Y.
- Forest City Leather Washer Co., Rockford, Ill.
- Frank Bros., New York, N. Y.
- Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Graton & Knight Mfg. Co., Worcester, Mass.
- Hays Pump & Planter Co., Galva, Ill.
- Hoffeld, R. & Co., Buffalo, N. Y.
- Humphryes Mfg. Co., The, Mansfield, O.
- Judd & Leland Mfg. Co., Clifton Springs, N. Y.
- Kendrick Valve & Washer Co., Syracuse, N. Y.
- ◆ Ladew, Edward R., Co., Inc., Glen Cove, N. Y.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- Marsh, Chas. W., Co., Muskegon, Mich.
- Marston & Co., I. G., Boston, Mass.
- ◆ Page Belting Co., Concord, N. H.
- Rahmann, Geo., & Co., New York.
- Rockford Leather Washer Co., Rockford, Ill.
- Simpleco—Simplex Mfg. Co., Auburn, N. Y.
- Stevens Co., Chas. L., Detroit, Mich.
- Sunset—L. P. Degen Belting Co., San Francisco, Cal.
- Sutherland Leather & Felt Co., Detroit, Mich.
- Warlo—Ward-Love Pump Corp., Rockford, Ill.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

**LEATHERS, VALVE.**

- Adams, C. F., Fort Worth, Texas.
- Algo—Auburn Leather Goods Co., Auburn, N. Y.
- Barwood—L. J. Barwood Mfg. Co., Stoneham, Mass.
- ◆ Chicago Belting Co., Chicago, Ill.
- Chicago Rawhide Mfg. Co., Chicago, Ill.
- Chicago Well Supply Co., Chicago, Ill.
- Dragon—The Dragon Mfg. Co., Marietta, O.
- Dynamo, Paragon, Waterproof—W. S. Nott Co., Minneapolis, Minn.
- Erb, W. B., & Co., Chicago, Ill.
- Fieldco—E. B. Field & Co., Worcester, Mass.
- Forest City Leather Washer Co., Rockford, Ill.
- Frank Bros., New York, N. Y.
- ◆ Graton & Knight Mfg. Co., Worcester, Mass.
- Johnson Belting Co., New York, N. Y.
- Kendrick Valve & Washer Mfg. Co., Syracuse, N. Y.
- ◆ Ladew, Edward R., Co., Inc., Glen Cove, N. Y.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- Marsh, Chas. W., Co., Muskegon, Mich.
- Page Belting Co., Concord, N. H.
- Paragon—W. S. Nott Co., Minneapolis, Minn.
- Rahmann, Geo., & Co., New York, N. Y.
- Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.
- Republic Belting Co., The, Cleveland, O.
- Rockford Leather Washer Co., Rockford, Ill.
- Sunset—L. P. Degen Belting Co., San Francisco, Cal.
- ◆ Wear Well—Detroit Leather Specialty Co., Inc., Detroit, Mich.
- Wolverine Brass Works, Grand Rapids, Mich.

**LEGS, BENCH, CAST IRON AND STEEL.**

- Baird Machine Co., The, Bridgeport, Conn.
- Barshal Co., The, Cleveland, O.
- Brown & Sharpe Mfg. Co., Providence, R. I.
- ◆ Chicago Pulley & Shafting Co., Chicago, Ill.
- C. M. B. Wrench Co., Garwood, N. J.
- Champion—Western Tool & Mfg. Co., Springfield, O.
- Fairbanks Co., The, New York, N. Y.
- Garwood—Garwood Bronze & Iron Works, Garwood, N. J.
- ◆ Halliwell—Standard Pressed Steel Co., Philadelphia, Pa.
- ◆ Hill Clutch Co., The, Cleveland, O.
- Lyon Metallic Mfg. Co., Aurora, Ill.
- Manley Mfg. Co., York, Pa.
- Manufacturing Equipment & Engineering Co., The, Framingham, Mass.
- New Britain Machine Co., New Britain, Conn.

**LEGS, BOILER.**

(See also Stands, Range, Boiler.)

Sanitary Company of America, Linfield, Pa.

**LEGS, CLOSET SEAT.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- Eclipse—Kupferle Foundry Co., John O., St. Louis, Mo.
- Heap & Sons, Wm., Grand Haven, Mich.
- Jenkins Mfg. Co., New York, N. Y.
- Liberty Mfg. Co., The, East Norwalk, Conn.
- Maltby, Geo. W., & Sons Co., Buffalo, N. Y.
- Modern Iron Works, Quincy, Ill.

**LEGS, CLOSET AND URINAL STALL.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- Brey & Krause Mfg. Co., Allentown, Pa.
- Edwardsville Brass Works, Edwardsville, Ill.
- Federal-Huber Co., Chicago, Ill.
- Fries & Co., Buffalo, N. Y.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Jenkins Mfg. Co., New York, N. Y.

- Nelson, N. O., Mfg. Co., St. Louis, Mo.
- Sanitas Mfg. Co., Boston, Mass.

**LEGS AND STANDS, LAUNDRY TRAY.**

- Adams, E. G., Kingston, N. Y.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Bailey's—Frederic T. Bailey & Co., North Scituate, Mass.
- Signall Co., The, Medina, N. Y.
- Bohrer, R. E., Rochester, N. Y. (adjustable).
- Boston—Joseph H. Young Co., Boston, Mass.
- Clarksville Foundry & Machine Works, Clarksville, Tenn.
- Essex Foundry, Newark, N. J.
- Fords Porcelain Works, Perth Amboy, N. J.
- Glenn Mfg. Co., St. Charles, Ill.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Kingston Granite Tub Works, Kingston, N. Y.
- McCambridge Co., Philadelphia, Pa.
- Modern Iron Works, Quincy, Ill.
- North Star Foundry Co., Minneapolis, Minn.
- Nustone Products Corp., New York, N. Y.
- Park & McKay Co., Detroit, Mich.
- Perfection—Euclid Stone & Brick Co., Cleveland, O.
- Richmond Foundry & Mfg. Co., Richmond, Va.
- Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.
- Rochester—R. E. Bohrer, Rochester, N. Y.
- Salem Brass & Iron Mfg. Co., Salem, N. J.
- Sanitary Company of America, Linfield, Pa.
- Swett Iron Works, A. L., Medina, N. Y.
- Well Never Slip—Well Bros., Chicago, Ill.
- Weehawken—Peerless Granite Co., Weehawken, N. J.
- Wolverine Foundry Co., Detroit, Mich.
- Young, Jos. H., Co., Boston, Mass. (adjustable).

**LEGS, LAVATORY.**

- American Brass & Copper Co., The, New York, N. Y.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Clow & Sons, James B., Chicago, Ill.
- Dubois & Co., F. N., New York, N. Y.
- Em Ess—The Meyer-Sniffen Co., New York, N. Y.
- Federal-Huber Co., Chicago, Ill.
- Glenn Mfg. Co., St. Charles, Ill.
- Good—Good Mfg. Co., New York, N. Y.
- Humphryes Mfg. Co., The, Mansfield, O.
- Jenkins Mfg. Co., New York, N. Y.
- Maddock's, Thos., Sons Co., Trenton, N. J. (porcelain).
- McCambridge Co., Philadelphia, Pa.
- Nelson Mfg. Co., N. O., St. Louis, Mo.
- Park & McKay Co., The, Detroit, Mich.
- ◆ Parker Co., The Chas., Meriden, Conn.
- Perkes Co., Charles, Philadelphia, Pa.
- Reid Brass Mfg. Co., Brooklyn, N. Y.
- Trenton Potteries Co., The, Trenton, N. J.
- Triumph—J. W. Kellar, Chicago, Ill.
- Wolff Mfg. Co., Chicago, Ill.

**LEGS, SHOP SEAT, CAST IRON.**

- New Britain Machine Co., The, New Britain, Conn.

**LEGS, SINK.**

- Advance—J. A. Zurn Mfg. Co., Erie, Pa.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Bailey's—Frederic T. Bailey & Co., North Scituate, Mass.
- Signall Co., The, Medina, N. Y.
- Brey & Krause Mfg. Co., Allentown, Pa.
- Crawford—F. W. Webb Mfg. Co., Boston, Mass.
- Diamond—Robinson Stoneware Co., Brooklyn, N. Y.
- Fee & Mason Mfg. Co., New York, N. Y.
- Foram Foundry & Mfg. Co., Flemington, N. J.
- Franklin Pipe & Foundry Co., Chicago, Ill.
- Glenn Mfg. Co., St. Charles, Ill.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Hercules Iron & Supply Co., Boston, Mass.
- Humphryes Mfg. Co., The, Mansfield, O.
- Jenkins Mfg. Co., New York, N. Y.
- MacDonald, A. E., Worcester, Mass. (adjustable).
- Modern Iron Works, Quincy, Ill.
- Mott Iron Works, The J. L., Trenton, N. J.
- Nelson, N. O., Mfg. Co., St. Louis, Mo.
- Richmond Foundry & Mfg. Co., Richmond, Va.
- Salem Brass & Iron Mfg. Co., Salem, N. J.
- Sanitary Company of America, Linfield, Pa.
- Sanitary—Jordan & Steele Mfg. Co., Hastings, Mich.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- Street & Kent Mfg. Co., Chicago, Ill.
- Union Sanitary Works, Noblesville, Ind.
- Wolff Mfg. Co., Chicago, Ill.

**LEGS, SINK, SWINGING SEAT.**

- Standard Sanitary Mfg. Co., Chicago, Ill.

**LETTERS AND FIGURES, BRASS.**

(See also "Stamps, Steel.)

- Wilcox, Crittenden & Co., Inc., Middletown, N. Y.

**LETTERS AND FIGURES, PATTERN.**

American Casting & Mfg. Co., Brooklyn, N. Y.  
Chain Products Co., The, Cleveland, Ohio.  
Everett, A., & Son, Auburn, N. Y.  
Knight, H. W., & Son, Seneca Falls, N. Y.  
Matthews, Jas. H., & Co., Pittsburgh, Pa.  
McCormick, J. S., Co., Pittsburgh, Pa.  
Newman Mfg. Co., The, Cincinnati, O.  
Perfect—The Dunker Supply Co., Canton, Ohio.  
Shanefelt Mfg. Co., The, Canton, O.  
Timmis & Clissold, Bound Brook, N. J.

**LEVELS, ARCHITECTS', CONTRACTORS',  
SURVEYORS' AND ENGINEERS'.**

Dietzen, Eugene, Co., New York, N. Y.  
Kolesch—Kolesch & Co., New York, N. Y.  
Monitor—C. L. Berger & Sons, Boston, Mass.  
Sterling—Warren-Knight Co., Philadelphia, Pa.  
White, David, Co., Inc., Milwaukee, Wis.

**LEVELS, CARPENTERS' AND MASONS'.**

Acme—The Acme Level & Mfg. Co., Archbold, O.  
Browne, W. G., Mfg. Co., Kingston, N. Y.  
C. S. Co.—The Chapin-Stephens Co., Pine Meadow, Conn.  
Cook's—S. Robert Jackson, Watertown, N. Y.  
Disston & Sons, Inc., Henry, Philadelphia, Pa.  
Empire (adjustable aluminum)—Empire Level Mfg. Co., Milwaukee, Wis.  
Goodell-Pratt Co., Greenfield, Mass.  
Gurley, W. & L. E., Troy, N. Y.  
Illuminated Level Co., Cliftondale, Mass.  
Sands—J. Sands & Sons, Detroit, Mich.  
Stanley Rule & Level Co., New Britain, Conn.  
Starrett, L. S., Co., Athol, Mass.

**LEVELS, MACHINISTS'.**

Ainsworth, Wm., & Sons, Denver, Colo.  
Columbia Calliper Co., Marietta, Pa.  
Disston, Henry, & Sons, Inc., Chicago, Ill.  
Goodell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., New York, N. Y.  
Red Devil—Smith & Hemenway Co., Irvington, N. J.  
Sands—J. Sands & Sons, Detroit, Mich.  
Starrett, L. S., Co., Athol, Mass.  
Williamsburg Mfg. Co., Williamsburg, Mass.  
Sterling—Warren-Knight Co., Philadelphia, Pa.

**LEVELS, PLUMBERS'.**

Goodell-Pratt Co., Greenfield, Mass.  
Sands—J. Sands & Sons, Detroit, Mich.  
Semi-Circular—The Ingraham Co., Bradford, Pa.  
Stanley Rule & Level Co., New Britain, Conn.  
Starrett, L. S., Co., Athol, Mass.

**LEVELS, ROAD BUILDERS'.**

Jackson Line Level—Joseph Woodwell Co., Pittsburg.  
Uncle Jim, Jim Dandy—The Baker Mfg. Co., Springfield, Ill.

**LEVELS, SHAFTING.**

Disston & Sons Co., Henry, Philadelphia, Pa.

**LEVELS, SURVEYORS'.**

Elliott Co., B. K., Pittsburg, Pa.

**LEVELS, TRACK.**

Aldon Company, The, Chicago, Ill.  
Irving—Irving Mfg. & Tool Co., New York, N. Y.  
Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
Verona Tool Works, Pittsburgh, Pa.

**LEVERS AND CROSS-BARS, WATER CLOSET, TANK.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Brey & Krause Mfg. Co., Allentown, Pa.  
Burlington—Burlington Brass Works, Burlington, Wis.  
Columbus Brass Co., Columbus, Ohio.  
Dunstane Brothers Mfg. Co., Concord, N. H.  
Dwasco Mfg. Co., Canandaigua, N. Y.  
Federal-Huber Co., Chicago, Ill.  
Frost Mfg. Co., The, Kenosha, Wis.  
Indiana Brass Co., The, Frankfort, Ind.  
K. B. C.—Koenek Bros. Co., Wildwood, N. J.  
MacDonald—A. E. MacDonald, Worcester, Mass.  
Miller, Charles A. Co., Sturgis, Mich.  
Monarch Trip—Monarch Brass Co., Cleveland, O.  
Morency-Van Buren Co., Sturgis, Mich.  
Park & McKay Co., The, Detroit, Mich.  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Union Metal Works, Chelsea, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.

**LEVERS, WATER CLOSET TANK, DOUBLE  
ACTION.**

Sherwood Brass Works, Detroit, Mich.

**LIDS, REPAIR.**

Clark, H. W., Co., Mattoon, Ill.  
Mueller Mfg. Co., H., Decatur, Ill.

**LIFTERS, HAMMER, DROP.**

Miner & Peck Mfg. Co., Derby, Conn.

**LIFTERS AND HOLDERS, PIPE, WELL.**

Babcock Lifter & Little Giant Holders—American Scale Co., Kansas City, Mo.  
Davis-Hansen Pump Co., Oshkosh, Wis.  
Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.  
Hector—The Crestline Mfg. Co., Crestline, O.  
Warlo-Giant—Ward-Love Pump Corp., Rockford, Ill.

**LIFTERS, VALVE, GASOLINE ENGINE.**

Herbrand Co., The, Fremont, O.  
Morgan Mfg. Co., Inc., Keene, N. H.  
Perfect Handle—H. D. Smith & Co., The, Plantsville, Conn.  
Syracuse Wrench Co., Syracuse, N. Y.  
Vichek Tool Co., Cleveland, O.

**LIFTS, ARMATURE.**

Hindman—The Duff Mfg. Co., Pittsburgh, Pa.

**LIFTS, SASH AND SKYLIGHT, AND OPERATING  
DEVICES.**

Advance—Advance Co., Richmond, Ind.  
Danzer Metal Works, Hagerstown, Md.  
Dearborn—The Payson Mfg. Co., Chicago, Ill.  
Ernst—Chas. K. Ernst, Buffalo, N. Y.  
Hitchings—Hitchings & Co., Elizabeth, N. J.  
King—King Construction Co., N. Tonawanda, N. Y.  
Lord & Burnham Co., Irvington-on-Hudson, N. Y.  
Lovell, Straight-Push—The Griffin Mfg. Co., Erie, Pa.  
Sargent—Sargent & Co., New Haven, Conn.  
Stover Mfg. Co., Freeport, Ill.  
"Worm Gear"—Drouve, G., & Co., Bridgeport, Conn.  
Yale & Towne Mfg. Co., The, New York.

**LIFTS, WATER, OR HOUSE PUMPS, ELECTRIC  
AND WATER MOTOR DRIVEN.**

(See also "Pumps, House, Electric.")

Barnes Mfg. Co., Mansfield, O.  
Barrie System—Ingersoll-Rand Co., New York.  
Buckeye—Buckeye Pump & Mfg. Co., Columbus, O.  
Champion—The Cleveland Faucet Co., Cleveland, O.  
Deming Co., The, Salem, O.  
Erwin Perfect—Erwin & Co., Chicago, Ill.  
Foster's Excelsior—Foster Pump Works, Brooklyn.  
Harris Air Pump Co., Indianapolis, Ind.  
Improved National—National Water Lift Co., Kalamazoo, Mich.  
Improved Triumph—The Ohio Pump & Brass Co., Columbus, O.  
Latta & Martin Pump Co., Hickory, N. C.  
McDaniel—Watson & McDaniel Co., Philadelphia, Pa.  
McKiernan Drill Co., New York, N. Y.  
Myers, F. E., & Bro., Ashland, O.  
New Duplex—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Niagara—Niagara Hydraulic Engine Co., Chester, Pa.  
Perfect—Illinois Pump & Brass Co., Peoria, Ill.  
Perry—United Pump & Power Co., Chicago, Ill.  
Rife Engine Co., New York, N. Y.  
Roberts—Geo. J. Roberts & Co., Dayton, O.  
Sanitary—The Sanitary Pump Co., Dayton, O.  
Simplex—Hawkins Pump Works, Downers Grove, Ill.  
Triune—The Vac Liquid Equipment Co., Cedar Rapids, Iowa (electric).  
Vac Liquid Equipment Co., Cedar Rapids, Ia.  
Valle-Kimes Co., Dayton, O.  
Valveless, Duplex—Illinois Pump & Brass Co., Peoria, Ill.  
Watson-Stillman Co., The, New York, N. Y.

**LIGHTERS, FRICTION, FOR COAL AND ACETYLENE  
GAS.**

American Lava Corp., Chattanooga, Tenn.

**LIGHTERS, FUSE.**

Hercules Powder Co., Wilmington, Del.  
Matthews—E. I. du Pont de Nemours & Co., Wilmington, Del.

**LIGHTNING ROD POINTS, COPPER.**

Waterbury Brass Goods Corp., Waterbury, Conn.  
Milburn—Alexander Milburn & Co., Baltimore, Md.  
Prest-O-Lite—Prest-O-Lite Co., Inc., Indianapolis, Ind.

**LIGHTS, FLARE, CONTRACTORS'.**

Buckeye—McLeod Co., Cincinnati, O. (oil and carbide)  
Carbic Acetylene Mfg. Co., Duluth, Minn.  
Milburn—Alexander Milburn & Co., Baltimore, Md.  
Mine Safety Appliances Co., Pittsburgh, Pa.  
Prest-O-Lite—Prest-O-Lite Co., Inc., Indianapolis, Ind.

**LIMITS, ENGINE SPEED.**

Strong's—Strong, Carlisle & Hammond Co., Cleveland, Ohio.

**LINERS, JOURNAL, BRONZE.**

American Safety Lamp & Mine Sup. Co., Scranton, Pa.

**LINERS, LOCOMOTIVE GUIDE.**

Starrett, L. S., Co., The, Athol, Mass.

**LINERS, PRESS ROLL.**

Sandusky Foundry & Machine Co., The, Sandusky, O.

**LINERS, PUMP AND PRESS.**

Sandusky Fdy. & Machine Co., Sandusky, O.

**LINERS, SECTION.**

Starrett, L. S., Co., The, Athol, Mass.

**LINING, BOILER FURNACE.**

McLeod & Henry Co., Troy, N. Y.  
Washburn & Granger, Inc., New York.

**LINING, BRAKE.**

- Allbestos Corporation, Philadelphia, Pa.  
A. B. C.—American Brake Lining Co., Lansdale, Pa.  
Ambler Autbestos—The Keasbey & Mattison Co., Ambler, Pa.  
Asbestos Fibre Spinning Co., N. Wales, Pa.  
Asbestos & Rubber Works of America, New York.  
◆ B. & B.—Advance Packing & Supply Co., Chicago, Ill.  
Bestbestos—Federal Asbestos Co., Paterson, N. J.  
Best Test—Union Rubber & Asbestos Co., Trenton, N. J.  
Blue Edge—Woven Steel Hose & Rubber Co., Trenton, N. J.  
Brakebestos—Advance Packing & Supply Co., Chicago, Ill.  
Cork Insert Co., Boston, Mass.  
Dominion Asbestos and Rubber Corp., New York.  
Durabestos—United States Asbestos Co., of Illinois, Chicago, Ill.  
Durobestos—Duckwall Belting & Hose Co., Indianapolis, Ind.  
Elektra—F. L. Horton Mfg., Co., Roxbury, Mass.  
Erbestos Brake Lining Co., Philadelphia, Pa.  
◆ Garco—General Asbestos & Rubber Co., Charleston, S. C. (for Automobiles, Motor Trucks & Friction Drums).  
Gilmer, L. H., Co., Tacoma, Philadelphia, Pa.  
◆ Globebestos—United & Globe Rubber Mfg. Co., Trenton, N. J.  
Johns-Manville, Incorporated, New York.  
Keasbey & Mattison Co., Ambler, Pa.  
Longwear—Wearwell Gasket & Packing Co., Camden, N. J.  
Mikesell Brothers Co., Chicago, Ill.  
Motabestos—Asbestos & Rubber Co., Norristown, Pa.  
Multibestos—Multibestos Co., Walpole, Mass.  
Multibestos—Standard Woven Fabric Co., Worcester, Mass.  
Perfection Tire & Rubber Co., Wabash, Ind.  
Raybestos—Raybestos Co., The, Bridgeport, Conn.  
Rubberbestos—McIlroy Belting & Hose Co., Hammond, Ind.  
Rusco—Russell Mfg. Co., Middletown, Conn.  
Standard Woven Fabric Co., Worcester, Mass.  
S-M-C—Staybestos Mfg. Co., Philadelphia, Pa.  
Smith, E. M., Co., Los Angeles, Cal.  
Steer—Joseph Meier's Sons, Newark, N. J.  
Testbestos—American Asbestos Co., Norristown, Pa.  
◆ Thermold—Thermold Rubber Co., Trenton, N. J.  
United States Asbestos Co., Mannheim, Pa.  
Vitabestos—S. Flory Mfg. Co., Bangor, Pa.  
Vulcan Asbestos Mfg. Co., Inc., New York, N. Y.

**LINING, CONVEYOR, PERFORATED.**

Nortmann—Duffke Co., Milwaukee, Wis.

**LINING, CUPOLA, BLAST FURNACE.**

Betson Plastic Fire Brick Co., Rome, N. Y.  
Laclede-Christy Clay Products Co., St. Louis, Mo.  
Mica Schist—J. W. Paxson Co., Philadelphia, Pa.  
Smith, F. L., & Co., New York, N. Y.  
U. S. Smelting Furnace Co., Belleville, Ill.

**LININGS, CYLINDER.**

Taunton—New Bedford Copper Co., Taunton, Mass.

**LINING, SMOKE STACKS AND BREACHINGS.**

Connery, Inc., Philadelphia, Pa.  
Monarch—Centre Asbestos & Magnesia Co., Chicago, Ill.  
◆ Vitribestos—Johns-Manville, Incorporated, New York, N. Y.

**LINING, STOVE.**

Connors, Wm., Paint Mfg. Co., Troy, N. Y.  
Cooper's—Cooper Sanitary Mfg. Co., Philadelphia, Pa.  
◆ Elastic—Johns-Manville, Inc., New York, N. Y.  
◆ Phoenix—H. W. Johns-Manville Co., New York, N. Y.  
Presbrey Stove Lining Co., Taunton, Mass.

**LINING, TRANSMISSION.**

A. B. C.—American Brake Lining Co., Lansdale, Pa.  
Federal Asbestos Co., Paterson, N. J.  
Fordbestos, Twill-wear—Federal Asbestos Co., Paterson, N. J.  
Garco—General Asbestos & Rubber Co., Charleston, S. C.  
Multibestos—Multibestos Company, Walpole, Mass.  
Universal—Staybestos Mfg. Co., Philadelphia, Pa.

**LINKS, CONNECTING, CHAIN.**

Chain Products Co., The, Cleveland, O.  
Diamond Chain & Mfg. Co., Indianapolis, Ind.  
Howe Chain Co., Muskegon, Mich.  
◆ Jeffrey Mfg. Co., Columbus, O.  
Keystone Drop Forge Works, Chester, Pa.  
Link-Belt Company, Chicago and Philadelphia.  
Marine Hardware Equipment Co., S. Portland, Me.  
Newhall Chain Forge & Iron Co., New York, N. Y.  
Steel & Tube Co. of America, Chicago, Ill.  
Laughlin, Thomas, Co., The, Portland, Me.  
◆ Thompson Pattern—Mark Mfg. Co., Chicago, Ill.  
◆ Webster Mfg. Co., Chicago, Ill.

**LINKS, FUSIBLE OR LINK FUSES.**

Appleton Electric Co., Chicago, Ill.  
Chicago Fuse Mfg. Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.

**LINKS, SPLIT.**

American Chain Co., Bridgeport, Conn.  
Plume & Atwood Mfg. Co., Waterbury, Conn.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Smith & Egge Mfg. Co., Bridgeport, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.

**LITHARGE.**

Nagle-Fisher Lead Co., Cincinnati, O.

**LOADERS—BOX CAR.**

Atlas Engineering Co., Milwaukee, Wis.  
Barber-Greene Co., Aurora, Ind.  
Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.  
Link-Belt Company, Chicago and Philadelphia.  
Wolf Company, The, Chambersburg, Pa.

**LOADERS, CONCRETE MIXER.**

Koehring Co., Milwaukee, Wis.

**LOADERS, LOG.**

American—American Hoist & Derrick Co., St. Paul, Minn.  
Clyde Iron Works, Duluth, Minn.  
Lidgerwood Mfg. Co., New York, N. Y.  
Marion Steam Shovel Co., The, Marion, Ohio.  
Wickes Bros., Saginaw, Mich.

**LOADERS, TRUCK AND WAGON.**

Atlas—Atlas Engineering Co., Milwaukee, Wis.  
Austin, F. C., Co., Inc., Chicago, Ill.  
Barber-Greene Co., Aurora, Ill.  
Bay City Dredge Works (sand and gravel), Bay City, Mich.  
Gifford-Wood Co., Hudson, N. Y.  
Hales, Geo., Mfg. Co., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Link Belt Company, Chicago and Philadelphia.  
Robins Conveying Belt Co., New York.  
Sackett, H. B., Screen & Chute Co., Chicago, Ill.  
Scoop Conveyor—Portable Machinery Co., Inc., Passaic, N. J.  
Seaverns, James B., Chicago, Ill.  
Smith—T. L. Smith Co., The, Milwaukee, Wis.  
Specialty Engineering Co., Philadelphia, Pa.  
Washington Machinery & Supply Co., Spokane, Wash.

**LOCATORS, UNDERGROUND PIPE, ELECTRIC.**

Electric Specialty Mfg. Co., Cedar Rapids, Ia.  
D. B. M., M. I. W.—Modern Iron Works, Quincy, Ill.

**LOCATORS, WATER LEAK.**

Aqua-Phone—Water Works Equipment Co., New York.  
Detectorphone—Water Works Equipment Co., New York.  
Transmit-O-Phone—Vola Trading Corp., New York.

**LOCKERS, METAL.**

American Iron & Wire Works, Chicago, Ill.  
Aurora Steel Products Co., Aurora, Ill.  
Barshall Company, Inc., The, Cleveland, O.  
Berloy—The Berger Mfg. Co., Canton, Ohio.  
Buffalo Wire Works Co., Buffalo, N. Y.  
Burger Iron Co., Akron, O.  
Churchill & Spaulding, Chicago, Ill.  
Cleveland Metalcraft Co., Cleveland, O.  
Clinton—Clinton Wire Cloth Co., Boston, Mass.  
Dexter Metal Mfg. Co., Camden, N. J.



Durand—Durand Steel Locker Co., Chicago, Ill.  
 Federal Steel Fixture Co., Chicago, Ill.  
 Federal—Morrill H. Hough, New York, N. Y.  
 H. & H.—The Hart & Hutchinson Co., New Britain, Conn. (steel).  
 Hess—Hess Warming & Ventilating Co., Chicago, Ill.  
 Jefferis—Richard W. Jefferis Co., Camden, N. J.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Manufacturing Equipment & Engineering Co., Framingham, Mass.  
 Medart, Fred Mfg. Co., St. Louis, Mo.  
 Pratt—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Shawmut Iron & Wire Works, Everett, Mass.  
 Terrell's—Terrell's Equipment Co., Grand Rapids, Mich.  
 Wright Wire Co., Worcester, Mass.

#### LOCKERS, STEEL, ENGINEERS' EQUIPMENT.

Berger—The Berger Mfg. Co., Canton, O.  
 Bernstein Mfg. Co., Philadelphia, Pa.  
 Willcox Engineering Co., Saginaw, Mich.

#### LOCKNUTS, MACHINE.

American Punch & Tool Co., Oregon, Ill.  
 Bartley—American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 Boss Nut—Boss Nut Co., Chicago, Ill.  
 Bulldog—Daniels Safety Device Co., Chicago, Ill.  
 Columbia—Columbia Nut & Bolt Co., Bridgeport, Conn.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Otis, Spencer, Co., Chicago, Ill.  
 Positive—Barber & Co., Chicago, Ill.  
 Reliance Mfg. Co., Massillon, O.  
 Schum Bros., New York.  
 Torsion Nut-Lock & Washer Co., Boston, Mass.  
 Western Automatic Machine Screw Co., The, Elyria, O.  
 Western Tool & Forge Co., Brackenridge, Pa.

#### LOCKNUTS, PIPE.

Acheson Mfg. Co., Braddock, Pa.  
 Crane Co., Chicago, Ill.  
 Fee & Mason, New York, N. Y.  
 Gb—Columbia Nut & Bolt Co., Inc., Bridgeport, Conn.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., Greensburg, Pa.  
 Kuhns Bros., Dayton, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Modern Mfg. Co., Cleveland, Ohio.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Ravena Iron Works, Ravena, N. Y.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Turner—Plumbers' Supply Co., Rochester, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### LOCKS, COIN CONTROLLED.

Coin Controlling Lock Co., Indianapolis, Ind.  
 Peter, Theodore, 3968 Avondale Ave., Chicago, Ill.

#### LOCKS, DOOR.

Richards-Wilcox Mfg. Co., Aurora, Ill.

#### LOCKS, NUT.

Alligator—Patterson Lock Nut Mfg. Co., Chicago.  
 American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hold-Tite—Steel Specialties Co., Wakefield, Mass.  
 Hugtite, Auto Hugtite—United Nut Lock Co., Springfield, Mass.  
 ♦ Kelly & Jones Co., Greensburg, Pa.  
 Keystone Nut Lock Mfg. Co., Pittsburgh, Pa.  
 National Lock Washer Co., Newark, N. J.  
 Pratt Chuck Co., Frankfort, N. Y.  
 ♦ Reliance Mfg. Co., Massillon, O.  
 Rockwood Sprinkler Co. of Mass., Worcester, Mass.  
 Schum Brothers, New York, N. Y.  
 Torsion—The Torsion Nut-Lock & Washer Co., Boston, Mass.  
 Verona—Verona Tool Works, Pittsburg, Pa.  
 Victor—Walker Bros., Syracuse, N. Y.  
 Western Tool & Forge Co., Brackenridge, Pa.

#### LOCKS, WINDOW, AUTOMATIC.

Bowlus Home Guard—The Bowlus Mfg. Co., Springfield, O.  
 Westlund—Carl G. Westlund Co., Worcester, Mass.

#### LOGS, SHIP.

Hand, John E., & Sons Co., Philadelphia, Pa.

#### LONGSCREWS.

Baltimore Nipple Co., Baltimore, Md. (black and gal.).  
 Campbell, Lewis, Boyerstown, Pa.  
 Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Crawford & Co., Chicago, Ill.  
 Crossman, W. C., Co., Philadelphia, Pa.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Ford & Kendig Co., Philadelphia, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.

Kelly & Jones Co., Greensburg, Pa.  
 Kleinman, Russell F., Philadelphia, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.

#### LOUVRES, VENTILATING.

Autovent—Batterman-Truitt Co., Chicago, Ill.

#### LUBRICANTS.

(See also "Grease," "Oil" and "Compounds.")

Acme Mystic—Swan & Finch Co., New York, (cutting).  
 Alpha—Albany Lubricating Co., New York, N. Y.  
 Atkinson—Economy Lubricating Co., Boston, Mass.  
 Bartley Graphite Products Co., Bartley, N. J.  
 Borne, Scrymser Co., New York, N. Y.  
 Continental Asbestos Corp., Worcester, Mass.  
 Cook's—Adam Cook's Sons, New York.  
 Dixon Crucible Co., Joseph, Jersey City, N. J.  
 Economy Oil Co., Chicago, Ill.  
 Economy—White & Bagley Co., The, Worcester, Mass.  
 Economy—Economy Lubricating Co., Boston, Mass.  
 Faul, William J., New York, N. Y.  
 Fiske's, Climax—Fiske Brother Refining Co., New York, N. Y.  
 Franklin Oil & Gas Co., The, Bedford, O.  
 Gargoyle—Vacuum Oil Co., New York, N. Y.  
 Garrett's—W. T. Garrett & Co., San Francisco, Cal.  
 Gredag—International Acheson Graphite Co., Niagara Falls, N. Y.  
 Havoline—Indian Refining Co., Inc., New York, N. Y.  
 Improved Process—Economy Lubricating Co., Boston, Mass.  
 Initial—New York Lubricating Co., New York, N. Y.  
 Ironsides—The Ironsides Co., Columbus, O.  
 Kasson—Enterprise Oil Co., Buffalo, N. Y.  
 Keystone—Keystone Lubricating Co., Philadelphia.  
 Keystone Oil & Mfg. Co., Chicago, Ill.  
 Kushlon Gear Coating, R. M., C. C.—Phoenix Oil Co., The, Cleveland, O.  
 Lube-Well, Lubro-Kool, None-Such—G. Whitfield Richards, Philadelphia, Pa.  
 Lubriko—Commercial Lubricating Co., Philadelphia.  
 Lubriko Co., The, Philadelphia, Pa.  
 Lubron—Knowlton Packing Co., Inc., Newtonville, Mass.  
 McVicker—Wm. B. McVicker Co., Brooklyn, N. Y.  
 Marengine—(marine engine) New York Lubricating Oil Co., New York.  
 Marile, Panhard, Panhard Oil Corp., New York, N. Y.  
 Mica Flake—United States Mica Co., Chicago, Ill.  
 Miller, Wm. F., Co., Brooklyn, N. Y. Trade names—American, Shield, Victory.  
 Monogram—(gas engine) New York Lubricating Oil Co., New York.  
 Motorline—Manufacturers' Belt Hook Co., Chicago.  
 Non-Fluid Oil—New York & New Jersey Lubricant Co., New York, N. Y.  
 Nylo—New York Lubricating Oil Co., New York, N. Y.  
 Oildag—Acheson Oildag Co., Port Huron, Mich.  
 Opco—American Oil Products Co., Buffalo, N. Y.  
 POCO—Providence Oil Co., Providence, R. I.  
 Philadelphia Grease—The Philadelphia Grease Mfg. Co., Philadelphia, Pa.  
 Randall—Randall Graphite Products Corp., Chicago.  
 Robinson Oils—Wm. C. Robinson & Son Co., Baltimore, Md.  
 Salvoni—Steel Mill Packing Co., Detroit, Mich.  
 Shaftene—The Tropical Paint & Oil Co., Cleveland, O.  
 Slo-Flo (for textile mach'y, mine cars, etc.)—Swan & Finch Co., New York.  
 Texaco—The Texas Co., New York, N. Y.  
 Warren—Warren Lubricant Co., Buffalo, N. Y.  
 Worner, O. & W. A., Philadelphia, Pa.  
 Zerola—Metalline Chemical Co., Cleveland, O.

#### LUBRICATORS.

(See also "Pumps, Oil.")

Acorn—American Lubricating Co., Detroit, Mich.  
 ♦ Admiral—The Wm. Powell Co., Cincinnati, O.  
 Ajax—American Lubricator Co., Detroit, Mich.  
 Albany—Adam Cook's Sons, New York, N. Y.  
 American—American Lubricator Co., Detroit, Mich.  
 Ashton's—Walter L. Flower Co., St. Louis, Mo.  
 Barclay—David Craig, Boston, Mass.  
 Boston Steam Specialty Co., Boston, Mass.  
 B. Co.—Wm. J. Bailey Co., Newark, N. J.  
 Bowen Products Co., Auburn, N. Y.  
 Boyden's—McNab & Harlin Mfg. Co., New York, N. Y.  
 Boylston's—Chicago Engineer Supply Co., Chicago, Ill.  
 Buckeye Iron & Brass Works, Dayton, O.  
 ♦ Buffalo (sight feed)—Sherwood Mfg. Co., Buffalo, N. Y.  
 Bull's Eye—Essex Brass Corp., Detroit, Mich.  
 Bull's Eye, Simplex, Duplex, Max—Nathan Mfg. Co., New York, N. Y.  
 ♦ Captain—The Wm. Powell Co., Cincinnati, O.  
 Crane Co., Chicago.  
 Chicago—The Ohio Injector Co., Wadsworth, O.  
 Collins—Collins Metallic Packing Co., Philadelphia, Pa. (range).  
 Columbia—American Lubricator Co., Detroit, Mich.  
 ♦ Columbian—The Wm. Powell Co., Cincinnati, O.  
 Couse—Eastwood Wire Mfg. Co., Belleville, N. J.  
 ♦ Crescent—The Wm. Powell Co., Cincinnati, O.



Crosby Steam Gauge & Valve Co., Boston, Mass.  
Cyclone, Giant, Hot Stuff, Crystal, Duke, Michigan,  
Rural, Thresher, Victor—Michigan Lubricator  
Co., Detroit, Mich.

- ◆ **Detroit, Improved Standard, Genuine, Zero—Detroit Lubricator Co., Detroit, Mich.**
- Dibble—Handian-Buck Mfg. Co., St. Louis, Mo.
- Edna Brass Mfg. Co., The Cincinnati, Ohio.
- Electric Water Sterilizer & Ozon Co., Scottsdale, Pa.
- Ellis—Knowlton Packing Co., Inc., Newtonville, Mass.
- Empress—Bowen Mfg. Co., Auburn, N. Y.
- ◆ **Essex—The Wm. Fowell Co., Cincinnati, O.**
- Essex—The G. B. Essex Brass Co., Detroit, Mich.
- Harlin's—McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ **Hart—Sherwood Mfg. Co., Buffalo, N. Y.**
- Haydenville Co., The, Haydenville, Mass.
- ◆ **Imperial—The Imperial Brass Mfg. Co., Chicago, Ill.**
- Jumbo—Star Brass Mfg. Co., Boston, Mass.
- ◆ **Kelly & Jones Co., Greensburg, Pa.**
- Kipp—Madison-Kipp Corp., Madison, Wis.
- Krahn—Krahn Mfg. Co., Milwaukee, Wis.
- Leidecker—Leidecker Tool Co., Marietta, O.
- ◆ **Lonerger, J. E., Co., Philadelphia, Pa.**
- ◆ **Lunkenheimer Co., The, Cincinnati, O.** (Trade names: Arctic, Banner, Cupid, Graphite, Hercules, Junior, Major, Senior, Vulcan, Beacon, Colonel, Emblem, Mars, Paragon, Paragon Duplex, Paragon Triplex, Premier, Independent.)
- McCullough Mfg. Co., Minneapolis, Minn.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ **McNae & Roberts Co., Detroit, Mich.**
- Meyerling—Oil Well Supply Co., Pittsburgh, Pa.
- ◆ **Michigan Lubricator Co., Detroit, Mich.**
- Nathan—Nathan Mfg. Co., New York, N. Y.
- Nugent, Wm. W. & Co., Chicago, Ill.
- Ohio—Ohio Grease Co., Loudonville, Ohio.
- Ohio—The Ohio Lubricator Co., Wadsworth, O.
- Oil Right—Link Mfg. Co., Kansas City, Mo.
- Osgood's—Osgood, J. L., Lubricator Co., Buffalo, N. Y.
- ◆ **Paragon, Duplex and Triplex—The Lunkenheimer Co., Cincinnati, O.**
- Peerless—Essex Brass Corp., Detroit, Mich.
- ◆ **Penberthy—Penberthy Injector Co., Detroit, Mich.**
- Phenix—Richardson-Phenix Co., Milwaukee, Wis.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Queen—American Lubricator Co., Detroit, Mich.
- Richardson—Richardson Phenix Co., Milwaukee, Wis.
- Schenck Mfg. & Supply Co., Parkers Landing, Pa.
- ◆ **Sherman Mfg. Co., E. B., Battle Creek, Mich.**
- ◆ **Spartan—The Wm. Fowell Co., Cincinnati, O.**
- Stunner—American Lubricator Co., Detroit, Mich.
- Swift—The Swift Lubricator Co., Elmira, N. Y.
- Texaco—The Texas Co., Houston, Tex.
- ◆ **Trojan—The Wm. Fowell Co., Cincinnati, O.**
- Walworth Mfg. Co., Boston, Mass.
- ◆ **Westmoreland—The Kelly & Jones Co., Greensburg, Pa.**
- ◆ **Williams, D. T., Valve Co., Cincinnati, O.** (Trade names: Wizard, Wyandote, Walrus, Worthy, Wonder.)

#### LUBRICATORS, AIRBRAKE.

Michigan—Michigan Lubricator Co., Detroit, Mich.  
Swift—The Swift Lubricator Co., Elmira, N. Y.

#### LUBRICATORS, AIR COMPRESSOR.

- American Injector Co., Detroit, Mich.
- American Lubricator Co., Detroit, Mich.
- Essex Brass Corp., Detroit, Mich.
- McCullough Mfg. Co., Minneapolis, Minn.
- ◆ **Penberthy Injector Co., Detroit, Mich.**

#### LUBRICATORS, CYLINDER.

- Ashton—Walter L. Flower Steam Specialty Co., St. Louis, Mo.
- ◆ **Buffalo (sight feed)—Sherwood Mfg. Co., Buffalo, N. Y.**
- ◆ **Detroit—Detroit Lubricator Co., Detroit, Mich.**
- Essex Brass Corp., Detroit, Mich.
- McCullough Mfg. Co., Minneapolis, Minn.
- Richardson-Phenix Co., Milwaukee, Wis.

#### LUBRICATORS, ELEVATOR GUIDE RAIL.

American Solidified Oil Works, Inc., Boston, Mass.  
Kilgour—D. F. Kilgour Lubricator Co., The, Lexington, Mass.

#### LUBRICATORS, FORCE FEED.

(See also "Pumps, Oil.")

- ◆ **Auto, Alpha, Mars, Marvel, Imperial, Paragon, Premier, Universal, Vulcan—Lunkenheimer Co., Cincinnati, O.**
- Biddison—Biddison Mfg. Co., The, Madison, Wis.
- Crosby Steam Gage & Valve Co., Boston, Mass.
- ◆ **Cyclone, Hot Stuff, Pepper Pod, Thresher, Victor—Michigan Lubricator Co., Detroit, Mich.**
- Dake—The Success Novelty Co., Richmond, Va.
- ◆ **Detroit Lubricator Co., Detroit, Mich.**
- Essex—Essex Brass Corp., Detroit, Mich.
- ◆ **Favorite—Sherwood Mfg. Co., Buffalo, N. Y.**
- ◆ **Hart—Sherwood Mfg. Co., Buffalo, N. Y.**
- Hills—McCanna Co., Chicago, Ill.
- Kipp—Madison-Kipp Corp., Madison, Wis.
- Krahn—Krahn Mfg. Co., Milwaukee, Wis.



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Takes the guess out of lubrication and reduces oil bills from 30 percent to 50 percent. Adjustable driving parts make it easy to attach to any make of engine, steam pump or compressor. Ask for catalog and prices.

**McCULLOUGH MFG CO.**

2630 Central Ave. Minneapolis, Minn.

- McCullough Mfg. Co., Minneapolis, Minn.
- McCord—McCord Mfg. Co., Detroit, Mich.
- Nathan Mfg. Co., New York, N. Y.
- ◆ **Powell Co., The Wm., Cincinnati, O.**
- ◆ **Rochester—Greene, Tweed & Co., New York, N. Y.**
- ◆ **Richardson Phenix Co., The, Milwaukee, Wis.**
- ◆ **Sterling—Interstate Machine Products Co., Rochester, N. Y.**

#### LUBRICATORS AND OIL CUPS, GAS ENGINE.

- ◆ **American Injector Co., Detroit, Mich.**
- Bowen Mfg. Co., Auburn, N. Y.
- ◆ **Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.**
- ◆ **Chicago—The Ohio Injector Co., Wadsworth, O.**
- ◆ **Commonwealth Brass Corp., Detroit, Mich.**
- Crosby Steam Gage & Valve Co., Boston, Mass.
- ◆ **Detroit—Detroit Lubricator Co., Detroit, Mich.**
- ◆ **Explo Sure-Feed—American Injector Co., Detroit, Mich.**
- Hall's—Hall Mfg. Co., New York, N. Y.
- Hydro—Essex Brass Corp., Detroit, Mich.
- Lonerger, J. E., Co., Philadelphia, Pa.
- ◆ **McNae & Roberts Co., Detroit, Mich.**
- ◆ **Michigan Lubricator Co., Detroit, Mich.** Trade names: Crystal, Friction, Stem, Index Lever, Meteor.
- ◆ **Milwaukee Valve Co., Milwaukee, Wis.**
- Nathan Mfg. Co., New York, N. Y.
- National Brass Mfg. Co., Rochester, N. Y.
- Perfection—American Lubricator Co., Detroit, Mich.
- ◆ **Powell Co., The Wm., Cincinnati, O.** (Trade names: Trident, Vakum, Viking, Viduct, Vitroy.)
- Reliable—American Lubricator Co., Detroit, Mich.
- Republic—W. D. Allen Mfg. Co., Chicago, Ill.
- Rich Mfg. Co., Boston, Mass.
- ◆ **Surefeed—American Injector Co., Detroit, Mich.**
- ◆ **Suredrop—Penberthy Injector Co., Detroit, Mich.**
- ◆ **Swift—The Swift Lubricator Co., Elmira, N. Y.**
- ◆ **Walworth Mfg. Co., Boston, Mass.**

#### LUBRICATORS, GRAPHITE.

- Dixon Crucible Co., Joseph, Jersey City, N. J.
- Earley's—James A. Griffiths & Son, Philadelphia, Pa.
- Hill & Griffith Co., Cincinnati, O.
- Kelly—T. P. Kelly & Co., Inc., New York, N. Y.
- National Graphite Lubricator Co., Scranton, Pa.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Randall—Randall Graphite Products Corp., Chicago.
- Richardson-Phenix Co., Milwaukee, Wis.
- T. M. S.—L. Sonneborn Sons, Inc., New York, N. Y.
- ◆ **U. S. G. Co.—U. S. Graphite Co., The, Saxinaw, Mich.**
- Winans—Winans Instrument Co., Glenside, Pa.

#### LUBRICATORS, LOCOMOTIVE.

- ◆ **Bull's Eye—Michigan Lubricator Co., Detroit, Mich.**
- ◆ **Detroit Lubricator Co., Detroit, Mich.**
- ◆ **Lunkenheimer Co., The, Cincinnati, O.**
- McCullough Mfg. Co., Minneapolis, Minn.

#### LUBRICATORS, LOOSE PULLEY.

(See also "Oilers, Loose Pulley.")

#### LUBRICATORS, MECHANICAL.

(See also Pumps, Oil, Lubricating.)

#### LUBRICATORS, PLAIN ENGINE.

- Essex Brass Corp., Detroit, Mich.
- Hall Mfg. Co., New York, N. Y.
- Haydenville Co., The, Haydenville, Mass.
- ◆ **Kelly & Jones Co., Greensburg, Pa.**
- ◆ **Michigan—Michigan Lubricator Co., Detroit, Mich.**
- ◆ **Penberthy—Penberthy Injector Co., Detroit, Mich.**
- ◆ **Powell Co., The Wm., Cincinnati, O.**
- ◆ **Swift—The Swift Lubricator Co., Elmira, N. Y.**
- ◆ **Walworth Mfg. Co., Boston, Mass.**

#### LUBRICATORS, SHAFTING.

Hall's—Hall Mfg. Co., New York, N. Y.  
Nathan Mfg. Co., New York, N. Y.

#### LUGS, BOILER AND TANK.

Hercules, Scully—Scully Steel & Iron Co., Chicago, Ill.  
Illinois Malleable Iron Co., Chicago, Ill.  
National Malleable Castings Co., The, Cleveland, C.  
Pratt, Wm. E., Mfg. Co., Chicago, Ill.

Racine Tank Lug Co., Racine, Wis.  
 Roe—Glasgow Iron Co., Philadelphia, Pa.  
 St. Louis Malleable Casting Co., St. Louis, Mo.

#### LUMBER, METAL.

Berger Mfg. Co., Canton, O.

#### MACHINES, ABATTOIR, BY-PRODUCT, LARD AND OLEO, PACKING HOUSE, SLAUGHTERING, TANK HOUSE.

Perrin, Wm. R., & Co., Chicago, Ill.

#### MACHINERY, ALCOHOL AND TURPENTINE PLANT.

M. & M.—Mitts & Merrill, Saginaw, Mich.  
 Struthers-Well Co., Warren, Pa.

#### MACHINERY, ALFALFA MILL.

♦ Jeffrey Manufacturing Co., Columbus, O.  
 Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, AMMONIA.

Gas Machinery Co., Cleveland, O.

#### MACHINES, ANGLE SHEARING.

(See "Shears, Metal, Power.")

#### MACHINES, ARMATURE DISC NOTCHING.

Ferracute—Ferracute Machine Co., Bridgeton, N. J.

#### MACHINERY, ASPHALT PAVING AND PLANT.

Cambridge Iron Works, Cambridge, Mass.  
 Muse & Gottfried Co., San Francisco, Cal.  
 Warren's—Warren Bros Co., Boston, Mass.

#### MACHINES, ASSEMBLING, NUT AND BOLT.

Williams, White & Co., Moline, Ill.

#### MACHINERY, AUTOMOBILE BODY.

Dauber-Bell Machine Co., Oshkosh, Wis.  
 Defiance Machine Works, Defiance, O.

#### MACHINERY, AUTOMOBILE REPAIR, SERVICE STATION.

The Manley Mfg. Co., York, Pa.

#### MACHINES, AXLE, CUTTING-OFF.

Espen-Lucas Machine Works, Philadelphia, Pa.  
 Fawcus—Fawcus Machine Co., Pittsburgh, Pa.

#### MACHINES, BAILING, OIL AND GAS WELL.

Spang—Spang Co., Butler, Pa.

#### MACHINERY, BAKERS'

Champion—Champion Machinery Co., Joliet, Ill.  
 Eclipse Fuel Engineering Co., Rockford, Ill.  
 Fox-Chase Engineering Co., Inc., Philadelphia, Pa.  
 Hadfield—Penfield Steel Co., The, Bucyrus, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kotten Machine Co., Jersey City, N. J.  
 Werner & Pfleiderer, Saginaw, Mich.

#### MACHINES AND CHUCKS, RABBITTING, EMERY WHEEL.

"Economy"—Skinner Chuck Co., New Britain, Conn.  
 Norton Grinding Co., Worcester, Mass.

#### MACHINES OR WAYS, BALANCING.

(For balancing revolving objects.)

Anderson—Anderson Bros. Mfg. Co., Rockford, Ill.  
 Bowsher—The N. P. Bowsher Co., South Bend, Ind.  
 20th Century Rockford—Rockford Tool Co., Rockford, Ill.

#### MACHINES, BALL TURNING.

American Tool & Machine Co., Boston, Mass.

#### MACHINES, BAND SAW BRAKING.

Bass Brothers, New York, N. Y.

#### MACHINERY, BAND SAW FILING AND SETTING.

American Woodworking Machinery Co., Rochester, N. Y.  
 ♦ Diaston, Henry, & Sons, Philadelphia, Pa.  
 Hanchett Swage Works, Big Rapids, Mich.  
 Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.  
 Mershon, Wm. B. & Co., Saginaw, Mich.  
 Silver—Silver Mfg. Co., Salem, O.  
 Vulcan Engineering Sales Co., Chicago, Ill.  
 Wright Co., Chas. E., Kenilworth, N. J.  
 Zelller & Nagel, Brooklyn, N. Y.

#### MACHINES, BAND SAW.

(See also "Mach'y, Sawmill," and "Mach'y, Wood-working.")

Advance—Advance Machinery Co., Van Wert, O.  
 ♦ American Saw Mill Machinery Co., Hackettstown, N. J.  
 Brysaw—Portable Band Saw Mill, Inc., New York, N. Y.  
 Clark Bros. Co., Olean, N. Y.  
 Diamond—Diamond Iron Works, Minneapolis, Minn.  
 Eureka—The Henry G. Thompson & Son Co., New Haven, Conn. (metal).  
 Gage, E. E. Mfg. Co., Gardner, Mass.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Klemm—E. R. Klemm, Chicago, Ill. (metal).  
 Mershon, Wm. B., & Co., Saginaw, Mich.  
 Oliver—Oliver Machinery Co., Grand Rapids, Mich.  
 Sidney Tool Co., The, Sidney, O.  
 Smith—H. B. Smith Machine Co., Smithville, N. J.  
 Tannewitz Works, The, Grand Rapids, Mich.  
 Wallace—J. D. Wallace & Co., Chicago, Ill.  
 Williamson—H. C. Williamson, Chicago, Ill.  
 Wright—Chas. E. Wright Co., Kenilworth, N. J.

#### MACHINES, BARREL HEAD AND STAVE PLANING.

Hisey-Wolf Machine Co., The, Cincinnati, O.  
 Holmes, E. & B. Machinery Co., Buffalo, N. J.  
 Oram, John S. Co., Cleveland, O.

#### MACHINERY, BEADING, SHEET METAL.

Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Toledo Machine & Tool Co., Toledo, O.

#### MACHINES, BELT CUTTING, LEATHER.

Swift—J. C. Prima, Hornell, N. Y.

#### MACHINES, BELT LACING AND SPLICING.

(See "Belt Lacers," and "Belt Splicers.")

#### MACHINES, BELT STRETCHING.

Horsting Leather Stretcher Co., Chicago, Ill.  
 Norris Brothers, Inc., Robinson, Ill.

#### MACHINES, BENDING AND STRAIGHTENING.

(For beam, rail, rod or shaft.)

Abramsen—Abramsen Engineering Co., Pittsburgh, Pa.  
 Ajax Mfg. Co., The, Cleveland, O.  
 Atlas Machine Co., The, Waterbury, Conn.  
 Baird Machine Co., Bridgeport, Conn.  
 Bancroft & Barnard, Gardner, Mass.  
 Bertsch & Co., Cambridge City, Ind.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Bliss Co., E. W., Brooklyn, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Canton Foundry & Machine Co., Canton, O.  
 Chambersburg Engine Co., Chambersburg, Pa.  
 Cincinnati Punch & Shear Co., Cincinnati, O.  
 Cleveland Punch & Shear Works, Co., Cleveland.  
 Cosgrove Patent—Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Dreis & Krump Mfg. Co., Chicago, Ill.  
 Eclipse—Geo. J. Christopher & Son, Wichita, Kan.  
 Espen-Lucas Machine Works, Philadelphia, Pa.  
 Excelsior Tool & Machine Co., East St. Louis, Ill.  
 Galland-Henning Mfg. Co., Milwaukee, Wis.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hilles & Jones Co., Wilmington, Del.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Kane & Roach, Syracuse, N. Y.  
 Long & Allstatter Co., Hamilton, O.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Morgan Construction Co., Worcester, Mass.  
 Morran Engineering Co., Alliance, O.  
 National Machinery Co., Tiffin, O.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Smith, H. Collier, Detroit, Mich.  
 Springfield Machine Tool Co., Springfield, O.  
 Standard Bridge Tool Co., The, Pittsburgh, Pa.  
 Toledo Machine & Tool Co., Toledo, O.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Universal—J. Fillmore Cox & Co., Bayonne, N. J.  
 Watson-Stillman Co., New York City.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.  
 Williams, White & Co., Moline, Ill.

#### MACHINERY, BEVEL GEAR, TURNING.

Betts Machine Co., Rochester, N. Y.

#### MACHINES, BEVELING.

Grammes, I. F. & Sons, Allentown, Pa.  
 Hilles & Jones Co., Wilmington, Del. (angle and plate).  
 Thomas Spacing Machine Co., Pittsburgh, Pa. (Angle.)

#### MACHINERY, BICYCLE TUBE AND PEDAL.

Garvin Machine Co., New York, N. Y.  
 Langeller Mfg. Co., Arlington, Cranston, R. I.

**MACHINES, BLASTING.**

- Davis—Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., De Nemours & Co., Wilmington, Del.  
 Trade names—Reliable, United States Standard.  
 Fidelity Electric Co., Lancaster, Pa.  
 Hercules Powder Co., Wilmington, Del.

**MACHINES, BLUE PRINTING, ELECTRIC.**

- Aloe Instrument Co., A. S., St. Louis, Mo.  
 Buckeye Engine Co., Salem, O.  
 Elliott, B. K., Co., Pittsburg, Pa.  
 Keuffel & Esser Co., New York, N. Y.  
 Paragon—Paragon Machine Co., Rochester, N. Y.  
 Pease-Vertical—C. F. Pease Co., Chicago, Ill.  
 Wagenhorst, J. H., & Co., Youngstown, O.  
 Weber, F., & Co., Philadelphia, Pa.  
 Wickes Bros., Saginaw, Mich.  
 Yawman & Erbe Mfg. Co., Rochester, N. Y.

**MACHINES, BLUEPRINT WRINGING.**

- Shaw Blueprint Machine Co., Newark, N. J.

**MACHINES, BOILER PLATE AND PIPE WELDING.**

- MacLeod, Walter, & Co., Cincinnati, O.  
 Ryerson, Jos. T., & Son, Chicago, Ill.

**MACHINERY, BOLT AND NUT.**

(See also "Headers, Bolt," and "Tappers, Nut.")

- Acme Machinery Co., Cleveland, O.  
 Ajax Mfg. Co., Cleveland, O.  
 Armstrong Mfg. Co., The Bridgeport, Conn.  
 Baird Machinery Co., Bridgeport, Conn.  
 Boyton & Plummer, Inc., Chester Depot, Vt.  
 Burdick—Howard Iron Works, Buffalo, N. Y.  
 Davis, W. P., Machine Co., Rochester, N. Y.  
 Geometric Tool Co., New Haven, Conn.  
 Harrington, Edward Son & Co., Philadelphia, Pa.  
 Haskell, Wm. H., Mfg. Co., Pawtucket, R. I.  
 Landis Machine Co., Inc., Waynesboro, Pa.  
 Namco—National Acme Co., The, Cleveland, O.  
 National Machinery Co., Tiffin, O.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oster Mfg. Co., The, Cleveland, O.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Peerless Automatic Mach. Co., Cleveland, O.  
 Prybil Machine Co., P., New York, N. Y.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Standard Engineering Co., Ellwood City, Pa.  
 Standard—Universal Machine Co., The, Bowling Green, Ohio.  
 Waterbury Farrell Foundry & Machine Co., Ansonia, Conn.  
 Webster & Perks Tool Co., Springfield, O.  
 ♦ Wells Bros. Co., Greenfield, Mass.  
 ♦ Willey & Russell Mfg. Co., Greenfield, Mass.  
 Williams Tool Corp., Erie, Pa.

**MACHINERY, BOLTING OR SHORT LOG SAWING.**

- ♦ Empire—American Saw Machinery Co., Hackettstown, N. J.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 King Bros. Machine Works, Harriman, Tenn.  
 Nurdyke & Marmon Co., Indianapolis (flour mill).  
 Norton Water Motor Co., Inc., Roslindale, Mass.  
 Ober—Ober Mfg. Co., Chagrin Falls, Ohio.  
 Ryerson, Jos. T., & Son, Chicago, Ill.

**MACHINES, BORING, DRILLING AND MILLING COMBINED.**

- Blomquist-Eck Machine Co., Cleveland, Ohio.  
 Deffance Machine Works, Defiance, Ohio.  
 G. & L.—Gidding & Lewis Machine Tool Co. (horizontal), Fond du Lac, Wis.

**MACHINES, BORING AND TURNING.**

- Amalgamated Machinery Corp., Chicago, Ill.  
 ♦ American Saw Mill Machinery Co., Hackettstown, N. J.  
 American Tool Works Co., Cincinnati, O.  
 Baker Bros., Toledo, O.  
 Barrett Machine Tool Co., Meadville, Pa.  
 Bausch Machine Tool Co., Brightwood, Mass.  
 Beaman & Smith Co., The, Providence, R. I.  
 Betts Machine Co., Inc., Rochester, N. Y.  
 Bickford—H. Bickford & Co., Lakeport, N. H.  
 Carroll Foundry & Machine Tool Co., Bucyrus, O.  
 Cincinnati Planer Co., The, Cincinnati, O. (Vertical).  
 Cleveland Machine Tool Co., Cleveland, O.  
 Coates—Coates Clipper Mfg. Co., Worcester, Mass.  
 Colburn—Colburn Machine Tool Co., Cleveland, O.  
 Davis Machine Co., W. P., Rochester, N. Y.  
 Deffance Machine Works, Defiance, Ohio.  
 Espen-Lucas Machine Works, Philadelphia, Pa.  
 Foothurt—The Foote-Burt Co., Cleveland, O.  
 G & E—A. B. Rover, Binghamton, N. Y.  
 Gisholt Machine Co., Madison, Wis.  
 Grammes, L. F., & Sons, Allentown, Pa. (post).  
 Grand Rapids—Grand Rapids Hdw. Co., Grand Rapids, Mich.

- Greenlee Bros. & Co., Rockford, Ill.  
 Greenwood, Chester & Co., Farmington, Me.  
 Harrington, Edward, Son & Co., Philadelphia, Pa.  
 Johnson, Jr., Co., Inc., I. H., Philadelphia, Pa.  
 Kane & Roach, Syracuse, N. Y.  
 Kidder Co., R. E., Worcester, Mass.  
 Lambert Machine & Engineering Co., Cleveland, O.  
 McCabe, J. J., New York, N. Y.  
 M. & M.—Mitts & Merrill, Saginaw, Mich.  
 ♦ Manning, Maxwell & Moore, Inc., Fitchburg, Mass.  
 Millers Falls Co., New York, N. Y. (wood).  
 Mult-Au-Matics—Bullard Machine Tool Co., Bridgeport, Conn.  
 National—National Lathe Co., Cincinnati, O.  
 National Woodworking Machinery Co., Dover, N. H.  
 New Haven Mfg. Co., New Haven, Conn.  
 Newton—Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Ober Mfg. Co., The, Chagrin Falls, O. (wood).  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Pedrick Tool & Machine Co., Philadelphia, Pa.  
 Phillips—Ajax Mfg. Co., Pittsburg, Pa.  
 Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Pratt & Whitney Co., Hartford, Conn.  
 Precision—Lucas Machine Tool Co., Cleveland, O.  
 Prentice & Co., Inc., Geo. G., New Haven, Conn.  
 Reed-Prentice Co., Boston, Mass.  
 Pulaski Foundry & Mfg. Corp., Pulaski, Va. (large).  
 Rockford Drilling Machine Co., Rockford, Ill. (horizontal).  
 Sellers & Co., Inc., Wm., Philadelphia, Pa.  
 Sidney Tool Co., The, Sidney, O.  
 Snell Mfg. Co., Flakdale, Mass.  
 Springfield Machine Tool Co., Springfield, O.  
 Swan Co., The, James, Seymour, Conn.  
 Taylor & Fenn Co., Hartford, Conn.  
 Teetsel—Teetsel Well Works, Terre Haute, Ind.  
 Thor—Independent Pneumatic Tool Co., Chicago, Ill.  
 Towsley—John T. Towsley Mfg. Co., Cincinnati, O.  
 Turner Machine Co., Danbury, Conn.  
 Universal—Universal Boring Machine Co., Hudson, Mass. (horizontal).  
 Western Machine Tool Works, Holland, Mich.  
 W. E.—San Francisco Engineering Co., San Francisco, Cal.  
 Whitney—Baxter D. Whitney & Son, Inc., Winchendon, Mass.  
 Woods Machine Co., S. A., Boston, Mass.

**MACHINERY, BOTTLING.**

- Bruno—Bruno Mfg. Co., Buffalo, N. Y.  
 Cleveland Faucet Co., The, Cleveland, O. (beer).  
 Dicke Tool Co., Downers Grove, Ill.  
 Eureka—Bishop-Babcock Co., Cleveland, O.  
 Meyer, Geo. J. Mfg. Co., Milwaukee, Wis.  
 Shields—McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.

**MACHINES, BOTTLE CAP MAKING AND SEALING.**

- Cedar Rapids Foundry & Machine Co., Inc., Cedar Rapids, Iowa.  
 Crown—Adriance Machine Works, Inc., Brooklyn, N. Y.

**MACHINES, BOTTLE WASHING.**

- Electric Specialty Co., Stamford, Conn.

**MACHINERY, BOX AND CRATE MAKING.**

- Blakeslee—American-Blakeslee Mfg. Co., Birmingham, Ala. (box shoo).  
 Chapman's, T. M., Sons Co., Old Town, Me.  
 Chase Turbine Mfg. Co., The, Orange, Mass.  
 Edson—Edson Mfg. Co., Boston, Mass.  
 Fischer Machine Works Co., Chicago, Ill.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 National Woodworking Machinery Co., Dover, N. H.  
 Woods Machine Co., S. A., Boston, Mass.

**MACHINERY, BOX BOARD AND HEADING.**

- Perkins & Co., Grand Rapids, Mich.

**MACHINERY, BOX CAR LOADING.**

- Link-Belt Company, Chicago, Ill.  
 Manierre—Manierre Eng. & Mach. Co., Milwaukee, Wis.

**MACHINES, BOX STRAPPING.**

- McChesney, J. S., & Co., Chicago, Ill.

**MACHINES, BRAID WINDING.**

- Meriden Machine Tool Co., Meriden, Conn.

**MACHINES, BRASING, ELECTRIC.**

- Aeroll—Aeroll Burner Co., Union Hill, N. J.  
 Electric Brazing & Welding Machine Co., Inc., New York, N. Y.

**MACHINES, BRAZING, KEROSENE OR GASOLINE.**

Turner Brass Works, The, Sycamore, Ill.

**MACHINES, BREAD WRAPPING AND SEALING.**

Improved Johnson—National Packaging Machinery Co., Boston, Mass.

**MACHINES, BREATHING.**

(See also "Pulmotors.")

Lyon Breathing Machine—The Cleveland Breathing Machine Co., Cleveland, O.

**MACHINERY, BRICK AND TILE.**

A. C. Co.—Arnold-Creager Co., The, New London, O.  
Anderson—Anderson Foundry & Machine Co., Anderson, Ind.

Bonnot Co., The, Canton, O.  
Brewer, H., & Co., Tecumseh, Mich.  
Chambers—Chambers Bros. Co., Philadelphia, Pa.  
Elmes, Charles F., Engineering Wks., Chicago, Ill.  
Excelsior Tool & Machine Co., E. St. Louis, Ill.  
Hadfield-Penfield Steel Co., The, Bucyrus, O.  
Industrial Supply Co., Keokuk, Ia.  
International Clay Machinery Co., Dayton, O.  
Lancaster Iron Works, Inc., Lancaster, Pa.  
Mahoney Machinery Co., Erie, Pa.  
Link-Belt Company, Chicago and Philadelphia.  
Martin & Arnold-Creager—Lancaster Iron Works, Inc., Lancaster, Pa.  
Means—Toronto Foundry & Machine Co., Inc., Toronto, Ohio.  
Naylor Bros., Peekskill, N. Y.  
New Haven—Eastern Machinery Co., New Haven, Conn.  
Pioneer—Taplin Rice Clerkin Co., The, Akron, O.  
Punxsutawney Foundry & Machine Co., Punxsutawney, Pa.  
Rust Special Clay Feeder—Marion Machine, Fdry. & Sup. Co., Marion, Ind.  
Schultz, A. L., & Son, Chicago, Ill.  
Scott—Madden Iron Works, Keokuk, Ia.  
Steel & Sons, J. E., Statesville, N. C.  
Tri-State—Tri-State Engineering Co., Zanesville, O.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Union Engineering Co., Cleveland, O.  
United Iron Works Co., Springfield, Mo.  
Wellington Machine Co., Wellington, O. (crushers, pugmills, barrows, trucks, molds).

**MACHINERY, BRIDGE AND GATE OPERATING.**

Earle Gear & Machinery Co., Philadelphia, Pa.  
Fairbanks, Morse & Co., Chicago, Ill.  
Fawcus—Fawcus Machine Co., Pittsburg, Pa.

**MACHINES, BRINE.**

Champion—Allman Gas Engine & Machine Co., New York, N. Y.

**MACHINES, BROACHING, AND BROACHES.**

Bilton Machine Tool Co., The, Bridgeport, Conn.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Elmes, Charles F., Engineering Works, Chicago, Ill.  
Lapointe Machine Tool Co., Hudson, Mass.  
Lapointe, J. N. Co., The, New London, Conn.  
Lourie Mfg. Co., Springfield, Ill.  
Velco—The Velco Mfg. Co., Inc., Greenfield, Mass.

**MACHINES, BROOM HANDLE.**

Ober—Ober Mfg. Co., Chagrin Falls, O.

**MACHINES, BUNDLING, METAL SCRAP.**

Vaughn—Turner-Vaughn & Taylor Co., Cuyahoga Falls, O.

**MACHINES, BURNISHING.**

(See also "Barrels, Burnishing" and "Lathes, Buffing and Polishing.")

Abbott Ball Co., Hartford, Conn.  
American Laundry Machinery Co., Norwood Sta., Cincinnati, O.  
Baird Machine Co., Bridgeport, Conn.  
No-Dust Drying Machine Co., Providence, R. I.

**MACHINERY, BUTTON MAKING.**

Baird Machine Co., The, Bridgeport, Conn.  
V & O—The V & O Press Co., Brooklyn, N. Y.

**MACHINES, CALENDERING, COTTON AND SILK.**

Duplex—Duplex Moulding Sander Co., Hornell, N. Y.

**MACHINERY, CALKING, PNEUMATIC.**

Ingersoll-Rand Co., New York, N. Y.

**MACHINES, CAM CUTTING AND GRINDING.**

Cincinnati Grinder Co., Cincinnati, O.  
Garvin Machine Co., The, New York, N. Y.

McDonough Mfg. Co., Eau Claire, Wis.  
Manville, E. J., Machine Co., Waterbury, Conn.  
Melling—Walcott Lathe Co., Jackson, Mich.  
Pratt & Whitney Co., Hartford, Conn.  
Rowbottom Machine Co., Waterbury, Conn.  
Webster & Bennett—Alfred Herbert, Ltd., New York, N. Y.

**MACHINERY, CAN MAKING.**

Adriance Machine Works, Brooklyn, N. Y.  
Ams, Max, Machine Co., Bridgeport, Conn.  
Bliss—E. W. Bliss & Co., Brooklyn, N. Y.  
♦ Chain Belt Co., Milwaukee, Wis.  
Ferracute Machine Co., Bridgeton, N. J.  
Garvin Machine Co., New York, N. Y.  
Heasley Machine Variety Iron & Tool Works, Toledo, Ohio.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Leffler, Chas., & Co., Brooklyn, N. Y.  
Link-Belt Company, Chicago and Philadelphia.  
Robins, A. K., & Co., Baltimore, Md.  
Sprague Canning Machinery Co., Chicago, Ill.  
Stecher, Chas. Co., Chicago, Ill.  
Union Engineering Co., The, Cleveland, O.  
Wold, Torris, Co., Chicago, Ill.

**MACHINERY, CANNING.**

Amalgamated Machinery Corp., Chicago, Ill.  
Ayars Machine Co., Salem, N. J.  
Berlin—Schaefer Mfg. Co., Berlin, Wis.  
Bruno—Bruno Mfg. Co. (filling), Buffalo, N. Y.  
Burt Machine Co., Baltimore.  
♦ Jeffrey Mfg. Co., Columbus, O.  
LaRue Mfg. Co., LaRue, O.  
Link-Belt Company, Chicago and Philadelphia.  
Peerless—American Compressor & Pump Co., Baltimore, Md.  
Peerless Husker Co., Buffalo.  
Robins, A. K., & Co., Baltimore.  
Sherman, S. F., Utica, N. Y.  
Sprague Canning Machine Co., Chicago, Ill.  
Standard Automatic Machine Co., Rochester, N. Y.

**MACHINES, CAP SCREW POINTING, SHAVING & THREADING.**

Economy—The Economy Engineering Co., Willoughby, Ohio.  
National Machinery Co., Tiffin, O.

**MACHINES, CARBONIZING.**

American Gas Furnace Co., Elizabeth, N. J.

**MACHINERY, CARPET CLEANING.**

Atwood-Stewart Vacuum Machine Co., Rockford, Ill.

**MACHINERY, CARPET & RUG.**

Giant—Giant Mfg. Co., Council Bluffs, Iowa.

**MACHINES, CARTON, AUTOMATIC.**

Brightwood—National Packaging Machinery Co., Boston, Mass.  
Redington Co., F. B., Chicago, Ill.

**MACHINES, CARTON FILLING, AUTOMATIC.**

F. B. Redington Co., Chicago, Ill.

**MACHINERY, CARTON SEALING.**

Brightwood, Codrington—National Packaging Machinery Co., Boston, Mass.  
Hoepner Automatic Scale Co., Chicago, Ill.  
Saranac Machine Co., Benton Harbor, Mich. (Automatic.)

**MACHINERY, CARTRIDGE MAKING AND AMMUNITION.**

Amalgamated Machinery Corp., Chicago, Ill.  
Consolidated Press Company, Hastings, Mich.  
Eagle—Rogers Eagle Machine Works, Buffalo, N. Y.  
R. & V.—Root & Vandervoort Eng. Co., E. Moline, Ill.  
Stecher, The Chas. Co., Chicago, Ill.  
Waterbury—Farrell Foundry & Machine Co., The, Waterbury, Conn.

**MACHINERY, CELLULOSE AND LINOLINUM.**

Farrell Fdy. & Mach. Co., Ansonia, Conn.

**MACHINERY, CEMENT MAKING.**

Allis-Chalmers Co., Milwaukee, Wis.  
American Pulverizer Co., East St. Louis, Ill.  
Austin Mfg. Co., Chicago, Ill.  
Bartlett & Snow Co., The C. O., Cleveland, O.  
Bailey-Burruss Mfg. Co., Atlanta, Ga.  
Bethlehem—Bethlehem Foundry & Machine Co., Bethlehem, Pa.  
Bradley Pulverizer Co., Allentown, Pa.  
♦ Chain-Belt Co., Milwaukee, Wis.  
Ehrsam, The J. B., & Son Mfg. Co., Enterprise, Kan.  
Eureka Stone & Ore Crusher Co., Cedar Rapids, Ia.  
Gardner Crusher Co., New York, N. Y.

Good Roads Machinery Co., The, Kennett sq., Pa.  
 Hadfield-Penfield Steel Co., The, Bucyrus, O.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Kennedy-Van Saun Mfg. & Eng. Co., New York.  
 Kent Mill Co., Brooklyn, N. Y.  
 Lewiston Foundry & Machine Co., Lewiston, Pa.  
 Link-Belt Company, Chicago, Ill.  
 McDonnell Boiler & Iron Works, Des Moines, Ia.  
 McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
 Pennsylvania Crusher Co., Philadelphia, Pa.  
 Power & Mining Machinery Co., Milwaukee, Wis.  
 Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
 Reeves Bros. Co., Alliance, O.  
 Smith, The T. L. Co., Milwaukee, Wis.  
 Stroud, E. H. & Co., Chicago, Ill.  
 Sturtevant Mill Co., Boston, Mass.  
 Symons Bros., Milwaukee, Wis.  
 Traylor Engineering & Mfg. Co., New York, N. Y.  
 United Iron Works Co., Kansas City, Mo.  
 Vulcan Iron Works, Wilkesbarre, Pa.  
 Webster Mfg. Co., Chicago, Ill.  
 Williams Patent Crusher & Pulv. Co., St. Louis, Mo.  
 Worthington Pump & Machinery Corp., New York, N. Y.

#### MACHINES, CEMENT AND PLASTER APPLYING.

"Cement-Gum"—Cement-Gum Co., Inc., Allentown, Pa.

#### MACHINES, CENTERING.

Espen-Lucas Machine Works, Philadelphia, Pa.  
 Hendey Machine Co., Torrington, Conn.  
 Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Phoenix Mfg. Co., The, Hartford, Conn.  
 Porter-Cable Machine Co., Syracuse, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 Springfield Machine Tool Co., Springfield, O.  
 Standard—Standard Engineering Works, Pawtucket, R. I.  
 Wells, F. E. & Son Co., Greenfield, Mass.  
 Whiton, D. E., Machine Co., New London, Conn.

#### MACHINERY AND EQUIPMENT, CHAIN FACTORY.

Atlas Machine Co., Waterbury, Conn.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Bliss, E. C., Mfg. Co., Providence, R. I.  
 Dauber-Bell Machine Co., Oshkosh, Wis.  
 Garvin Machine Co., New York, N. Y.  
 Nelson, A. H., Machine Co., The, Bridgeport, Conn.  
 Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.  
 V & O—The V & O Press Co., Glendale, L. I., N. Y.

#### MACHINERY, CHAIR AND TABLE LEG.

Defiance Machine Works, The, Defiance, O.

#### MACHINES, CHAIR-MAKING.

Dauber-Bell Machine Co., Oshkosh, Wis.  
 Trevor Mfg. Co., Lockport, N. Y.

#### MACHINERY, CHAIR SEAT.

Tannewitz Works, The, Grand Rapids, Mich.

#### MACHINERY, CHAMPFERING.

Grant—Grant Mfg. & Machine Co., Bridgeport, Conn.

#### MACHINES, CHANNELING, STONE.

Ingersoll-Rand Co., New York, N. Y.  
 Kane & Roach, Syracuse, N. Y.

#### MACHINERY, CHEMICAL WORKS.

Bay City Iron Co., Bay City, Mich.  
 Glens Falls Machine Works, Glens Falls, N. Y.  
 Stroud, E. H. & Co., Chicago, Ill.  
 Townsend Furnace & Machine Shop Co., Albany, N. Y.  
 Treadwell, M. H. Co., Inc., New York, N. Y.

#### MACHINES, CHUCKING.

(See "Lathes, Turret.")

#### MACHINES, CHUCKING, MULTIPLE SPINDLE.

Jackson—Vertomatic Mfg. Co., Reading, Pa.  
 McDonough Mfg. Co., Eau Claire, Wis.

#### MACHINES, CIGAR BOX.

Blue Ball Machine Works, Blue Ball, Pa.  
 Grammes, L. F. & Sons, Allentown, Pa.

#### MACHINERY, CLAMP CARRYING.

Black Bros. Co., The, Mendota, Ill. (Hand and power.)

#### MACHINERY, CLAMPING.

(For Woodworking.)

Handy Mfg. Co., Chicago, Ill.  
 Palmer, A. E. & Sons, Owosso, Mich.  
 Redin, Ekstrom & Co., Rockford, Ill.

#### MACHINERY, CLAPBOARD.

Lane Mfg. Co., Montpelier, Vt.

#### MACHINERY, CLAY EXCAVATING.

Buckeye Traction Ditcher Co., Findlay, O.

#### MACHINES, CLASSIFYING.

Kennedy-Van Saun Mfg. & Eng. Co., New York.

#### MACHINERY AND EQUIPMENT, CLAY-WORKING.

A. C. Co.—Arnold-Creager Co., The, New London, Ohio.  
 Asheville Supply & Fdry. Co., Asheville, N. C.  
 Bonnot Co., The, Canton, O.  
 Crossley Machine Co., Trenton, N. J.  
 Fate, J. D., Co., The, Plymouth, O.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 Industrial Supply Co., Keokuk, Ia.  
 International Clay Machinery Co., Dayton, O.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Mahoney Machinery Co., Erie, Pa.  
 Patterson Fdy. & Mach. Co., East Liverpool, O.  
 Stroud, E. H. & Co., Chicago, Ill.  
 Taplin-Rice-Clerkin Co., Akron, O.  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
 United Iron Works Co., Kansas City, Mo.

#### MACHINES, CLEANING, FOR METAL PARTS.

Crescent—Crescent Washing Machine Co., New York, N. Y.

#### MACHINES, CLOTHES-PIN MAKING.

Goodspeed Machine Co., Winchendon, Mass.  
 Humphrey Machine Co., Keene, N. H.  
 Nilson, A. H., Machine Co., Bridgeport, Conn.

#### MACHINERY, COAL BRIQUETTING.

American Clay Machinery Co., Bucyrus, O.  
 Elmes, Charles T., Engineering Works, Chicago, Ill.  
 Watson-Stillman Co., Aldene, N. J.

#### MACHINES, COAL CUTTING.

(See also "Machinery, Mining.")

Able Engineering Co., New York, N. Y.  
 Goodman—Goodman Mfg. Co., Chicago, Ill. (electric)  
 Ingersoll-Rand Co., New York, N. Y. Trade names,  
 Little David, New Ingersoll, Radialaxe.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Morgan-Gardner Electric Co., Chicago, Ill.  
 Orton & Steinbrenner Co., Chicago, Ill.  
 Pneumelectric—Pneumelectric Corp., The, Syracuse, N. Y.  
 ♦ Sullivan Machinery Co., Chicago, Ill.

#### MACHINES, COAL PULVERIZING.

William Patent Crusher & Pulverizer Co., St. Louis, Mo.

#### MACHINERY, COAL SAMPLING.

Beach-Russ Co., New York, N. Y.

#### MACHINES, COAL WAGON LOADING AND COAL BAGGING.

Converse, F. S. Co., Inc., Johnson City, N. Y.  
 Link-Belt Company, Chicago, Ill.  
 Specialty Engineering Co., Philadelphia, Pa.

#### MACHINERY, COAL AND COKE HANDLING.

Bartlett & Snow Co., The C. O., Cleveland, O.  
 Bailey-Burruss Mfg. Co., Atlanta, Ga.  
 Beaumont, R. H. Co., Philadelphia, Pa.  
 Case Crane Co., Columbus, O.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Clipper—Loomis Machine Co., Tiffin, O.  
 Covington Machine Co., Covington, Va.  
 Diamond Machine Co., Monongahela, Pa.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Farnham Mfg. Co., Buffalo, N. Y.  
 Gifford-Wood Co., Hudson, N. Y.  
 Haiss Mfg. Co., Geo., New York, N. Y.  
 Harrison—Howe Scale Co., The, Rutland, Vt.  
 Hunt Co., C. W., New York, N. Y.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lake Shore Engine Works, Marquette, Mich.  
 Link-Belt Company, Chicago and Philadelphia.  
 Marion Machine, Foundry & Sup. Co., Scottsdale, Pa.  
 Mead & Morrison Mfg. Co., Boston, Mass.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 Morrow Mfg. Co., Wellston, O.  
 Munson Mill Machinery Co., Inc., Utica, N. Y.  
 Northern Engineering Works, Detroit, Mich.  
 Peck Carrier—Link-Belt Co., Chicago and Philadelphia.  
 Puget Sound Machinery Depot, Seattle, Wash.  
 Richardson Scale Co., Passaic, N. J.  
 Robins Conveying Belt Co., Inc., New York.  
 S-A—Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.

South Side Fdy. & Mach. Wks., Charleston, W. Va.  
 Stephen-Adams Mfg. Co., Aurora, Ill.  
 Union Engineering Co., Cleveland, O.  
 Webster Mfg. Co., The Tiffin, O.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 ♦ Yale & Towne Mfg. Co., The, New York, N. Y.

#### **MACHINES, COAL SHEARING.**

Radialaxe—Ingersoll-Rand Co., New York, N. Y.

#### **MACHINERY, COAL WASHING.**

♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 Puget Sound Machinery Depot, Seattle, Wash.  
 Simplex—Deister Machine Co., Fort Wayne, Ind.

#### **MACHINERY, COAL WEIGHING.**

Reliance—Reliance Weighing Machine Co., Chicago, Ill.

#### **MACHINES, COCK GRINDING.**

(See "Grinders, Cock.")

#### **MACHINERY, COFFEE.**

Engelberg—Engelberg Huller Co., Syracuse, N. Y.  
 Howes, The S., Co., Silver Creek, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Squier, Geo. L., Mfg. Co., Buffalo, N. Y.

#### **MACHINERY, COLD DRAWN STEEL.**

Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.

#### **MACHINES, COLLARING, DRILL STEEL.**

Denver Rock Drill Mfg. Co., The, Denver, Colo.

#### **MACHINERY, CONCENTRATING.**

Dings Magnetic Separator Co., Milwaukee, Wis.  
 Durlon Castings Co., Dayton, O.  
 Plat-O—Deister Machine Co., Fort Wayne, Ind.  
 United Iron Works Co., Kansas City, Mo.

#### **MACHINES, CONCRETE BREAKING.**

Buckeye—Buckeye Traction Ditcher Co., Findlay, O.

#### **MACHINES, CONDUCTOR PIPE AND HAVE TROUGH.**

Canton Foundry & Machine Co., Canton, O.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Niagara Machine & Tool Works, Buffalo, N. Y.

#### **MACHINES, CONDUIT WIRING.**

National—Manning, Maxwell & Moore, Inc., New York.  
 Sleeper & Hartley, Inc., Worcester, Mass.

#### **MACHINERY, CONFECTIONERS'.**

Crane Co., Wm. M., New York, N. Y. (furnaces).  
 Improved Appliance Co., Brooklyn, N. Y. (furnaces).  
 Stroud, E. H., & Co., Chicago, Ill.  
 Trevor Mfg. Co., Lockport, N. Y.  
 Union Engineering Co., The, Cleveland, O.

#### **MACHINERY, COOPERAGE.**

Heartley Machine Variety Iron & Tool Works, Toledo, O. (For bung holes.)  
 Holmes Machinery Co., E. & B., Buffalo, N. Y.  
 M. & M.—Mitts & Merrill, Saginaw, Mich.  
 Strait Mfg. Co., The H. N., Kansas City, Mo.  
 Zunner Machine Co., The, Boston, Mass.

#### **MACHINES, COPING.**

Cleveland Punch & Shear Works Co., Cleveland, O.  
 Des Moines Bridge & Iron Co., Pittsburgh, Pa.  
 Hillis & Jones Co., East Wilmington, Del.  
 Long & Allstatter Co., Hamilton, O.  
 Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Pels, Henry, & Co., New York, N. Y.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Wickes Bros., Saginaw, Mich.  
 Williams, White & Co., Moline, Ill.

#### **MACHINERY AND EQUIPMENT, COPPER WIRE MILL.**

Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.

#### **MACHINES, CORDWOOD SAWING.**

American—American Saw Mill Machinery Co., Hackensack, N. J.  
 Hill, Wm. E., Co., Kalamazoo, Mich.  
 Ireland Machine & Foundry Co., Norwich, N. Y.

#### **MACHINES, CORE BOX.**

The Will-Burt Co., Orrville, O.

#### **MACHINES, CORE TESTING.**

Wadsworth—The Wadsworth Core Machine & Equipment Co., Akron, O.

#### **MACHINES, CORE MAKING.**

American—American Foundry Equipment Co., New York, N. Y.  
 Osborn Mfg. Co., Cleveland, O.  
 Wadsworth Core Machine & Equipment Co., Akron, O.

#### **MACHINES, CORE SAND RECLAIMING.**

Sly, W. W., Mfg Co., Cleveland, O.

#### **MACHINES, CORE WIRE STRAIGHTENING.**

Blake & Knowles Steam Pump Works, New York.

#### **MACHINERY, CORRUGATED CULVERT.**

Keene, Geo. C., & Co., Cincinnati, O.

#### **MACHINES FOR CORRUGATING GRAIN ROLLS.**

Robinson, J. M. Mfg. Co., Cincinnati, O.  
 Simpson—The Orville Simpson Co., Cincinnati, O.

#### **MACHINES, CORRUGATING, SHEET METAL.**

Geo. C. Keene & Co., Cincinnati, O.

#### **MACHINES, COTTON DUSTING.**

Ward-Love Pump Corp., Rockford, Ill.

#### **MACHINERY, COTTON GINNING.**

Eagle—Continental Gin Co., Birmingham, Ala.  
 Gullet Gin Co., Amite, La.  
 Mechlenburg Iron Works, Charlotte, N. C.

#### **MACHINERY, COTTONSEED OIL.**

Creasy Rotary Filler Co., Ballinger, Tex.  
 French Oil Mill Machinery Co., Piqua, O.  
 Fritz Foundry & Machine Co., Geo. J., St. Louis, Mo.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Imperial—Pratt Engineering & Machine Co., Atlanta, Ga.  
 Munger—Continental Gin Co., Birmingham, Ala.  
 Riter-Conley Co., Pittsburgh, Pa.  
 Stroud, E. H., & Co., Chicago, Ill.

#### **MACHINES, COTTON PICKING, VACUUM.**

Thurman, J. S., St. Louis, Mo.

#### **MACHINERY AND EQUIPMENT, COTTON MILL.**

Woonsocket Machine & Press Co., Woonsocket, R. I.

#### **MACHINES, COUNTING, DUPLICATE ARTICLES.**

Ayers, John W. & Son, New York, N. Y.  
 National—National Scale Co., Chicopee Falls, Mass.  
 The Productimeter—Durant Mfg. Co., Milwaukee, Wis.

#### **MACHINERY, CRACKER.**

The J. H. Day, Cincinnati, O.

#### **MACHINES, CRANK PIN TURNING.**

Gardner—Alfred Herbert, Ltd., New York, N. Y.  
 Hill-Standard Co., Anderson, Ind.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Pedrick—Pedrick Tool & Machine Co., Philadelphia.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Underwood, H. B., Corp., Philadelphia, Pa.

#### **MACHINES, CRANK PIN TRUING UP.**

Rooksby & Co., Philadelphia, Pa.

#### **MACHINERY, CRAYON AND CHALK MOLDING.**

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

#### **MACHINES, CRIMPING, SHEET METAL AND WIRE.**

Ohl—Geo. A. Ohl & Co., Newark, N. J.  
 Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Smurr & Kamer Machine Co., Chicago, Ill.

#### **MACHINERY, CROSS ARM.**

Chattanooga Machinery Co., Chattanooga, Tenn.

#### **MACHINERY, CRUSHING AND PULVERIZING.**

(See also "Pulverizers, Air Separation.")

Acme—Acme Road Machinery Co., Frankfort, N. Y.  
 Aero—Aero Pulverizer Co., The, New York.  
 Albany Iron Works, Albany, Ore.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 Alsing, J. R., Engineering Co., New York.  
 American Pulverizer Co., St. Louis, Mo.  
 Aurora-Western Wheeled Scraper Co., Aurora, Ill.



Automatic Rotary Pump Co., New York.  
 Bartlett & Snow Co., The, C. O., Cleveland, O.  
 Beach-Russ Co., New York, N. Y.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Bonnot Co., The, Canton, O.  
 Bradley Pulverizer Co., Allentown, Pa.  
 Buchanan—C. G. Buchanan Co., New York, N. Y.  
 Bulldog—Traylor Engineering & Mfg. Co., Allentown, Pa. (Gyratory and jaw.)  
 Excelsior Tool & Machine Co., East St. Louis, Mo.  
 Farnham Mfg. Co., Buffalo, N. Y.  
 Farrel Foundry & Machine Co., Ansonia, Conn.  
 Fuller-Lehigh Co., Fullerton, Pa.  
 Ideal—O. J. Moussette Co., Inc., New York, N. Y.  
 Industrial Supply Co., Keokuk, Iowa (shale).  
 ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Kaestner & Co., Chicago, Ill.  
 K-E—K-E Pulverizer Co., Inc., New York, N. Y.  
 Kennedy-Van Saun Mfg. & Eng. Co., New York.  
 Lewistown Foundry & Machine Co., Lewistown, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Manufacturers' Equipment Co., The, Dayton, O.  
 Marine Iron Works, Chicago, Ill.  
 Maxecon, American Air Separator, Perfectecon—Kent Mill Co., Brooklyn, N. Y.  
 McCool—The Mine & Smelter Supply Co., Salt Lake City, Utah.  
 McKenna—McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.  
 McLanahan-Stone Machine Co., Hollidaysburg, Pa. (single roll.)  
 Monarch—O. J. Moussette Co., Inc., Brooklyn, N. Y.  
 Orton & Steinbrenner Co., Chicago, Ill.  
 Power & Mining Machinery Co., New York.  
 Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
 Reliance—Universal Road Machinery Co., Kingston, N. Y.  
 Reliance Steel Casting Co., Pittsburgh, Pa.  
 Rex—O. J. Moussette Co., Inc., Brooklyn, N. Y.  
 Robins Conveying Belt Co., New York, N. Y.  
 Samson—The Mine & Smelter Supply Co., Salt Lake City, Utah.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Scottdale Machine & Mfg. Co., Scottdale, Pa.  
 Stedman's Foundry & Machine Works, Aurora, Ind.  
 Stroud, E. H., Mfg. Co., Chicago, Ill.  
 Sturtevant Mill Co., Boston, Mass.  
 Tel-smith—Smith Engineering Works, Milwaukee, Wis.  
 Teetsell Well Works, Terre Haute, Ind.  
 Tisco—Taylor-Wharton Iron & Steel Co., High Bridge, N. J. (parts only).  
 Traylor Engineering & Mfg. Co., Allentown, Pa.  
 Union Engineering Co., Cleveland, O.  
 Union Iron Works, Oakland, Cal.  
 Union Iron Works, Springfield, O.  
 Webb City & Carterville Foundry & Machine Works, Webb City, Mo.  
 Webster Mfg. Co., Chicago, Ill.  
 Western—Western Wheeled Scraper Co., Aurora, Ill.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.  
 Wilnot Engineering Co., Hazelton, Pa.  
 Williams Patent Crusher & Pulverizer Co., St. Louis, Mo.

#### MACHINES, CUPOLA CHARGING.

Morgan Engineering Co., Alliance, O.

#### MACHINERY, OUTLET POLISHERS.

Luther Mfg. Co., Inc., Olean, N. Y.

#### MACHINES, CUTTING-OFF, METAL.

Abrasive Metal—Gilman & Son, Springfield, Vt.  
 Apex—The Merrill Mfg. Co., Toledo, O.  
 Billings & Spencer Co., Hartford, Conn.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 ◆ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Burke Machine Co., Conneaut, O.  
 Burr, John T. & Sons, Brooklyn, N. Y.  
 Cleveland Punch & Shear Works Co., Cleveland, O.  
 Cochran Bly Co., Rochester, N. Y.  
 Davis Machine Tool Co., Rochester, N. Y.  
 Espen-Lucas Machine Works, Philadelphia, Pa.  
 Etna Machine Co., Toledo, Ohio.  
 Fawcus Machine Co., Pittsburgh, Pa.  
 Fox Machine Co., Grand Rapids, Mich.  
 Garvin Machine Co., The, New York, N. Y.  
 Gorton Machine Co., Geo., Racine, Wis. (high speed).  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hurlbut's—Hurlbut-Rogers Machine Co., South Sudbury, Mass.  
 Lane Mfg. Co., Montpelier, Vt.  
 Lee-Simplex—Lee Equipment Co., Philadelphia, Pa.  
 Mann Corporation, Kankakee, Ill.  
 McCabe, J. J., New York, N. Y.  
 Newton—Newton Machine Tool Works, Inc., Philadelphia, Pa. (cold saw).  
 Niles-Bement-Pond Co., New York, N. Y.  
 Nutter & Barnes Co., Hinsdale, N. H.  
 Pratt & Whitney Co., Hartford, Conn.  
 Racine—Racine Tool & Machine Co., Racine, Wis.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Sellow—Sellow Machine Tool Co., Pawtucket, R. I.

Taylor-Wilson Mfg. Co., McKees Rocks, Pa.  
 United States Machine Co., Williamsport, Pa. (saw).  
 Van Dyck-Churchill Co., New York, N. Y.

#### MACHINES, CUTTING OFF, PIPE.

(See also Machines, Pipe Cutting.)

Jarecki Mfg. Co., Erie, Pa.

#### MACHINES, CUTTING AND DRAWING, METAL.

Atlas Machine Co., The, Waterbury, Conn.  
 Konigsloew Stamping & Tool Works, E. Cleveland, O.

#### MACHINES, CUTTING-OFF, WOOD.

(See "Machinery, Woodworking.")

#### MACHINES, CUTTING, TUBE AND ROD.

(See also "Cutters, Pipe.")

Hallden Machine Co., Waterbury, Conn.

#### MACHINES, CYLINDER BORING.

Barrett—Barrett Machine Tool Co., Meadville, Pa.  
 Baush Machine Tool Co., Springfield, Mass.  
 Beaman & Smith Co., The, Providence, R. I.  
 De fiance Machine Works, Defiance, Ohio.  
 Hole Hog—Moline Tool Co., Moline, Ill.  
 It's a Baker—Baker Bros., Toledo, O.  
 Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Pedrick Tool & Machine Co., Philadelphia.  
 Rearwin, W. D., Grand Rapids, Mich. (Automobile).  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Underwood, H. B., Corp., Philadelphia, Pa.  
 Valley Iron Works Co., Appleton, Wis.  
 Whitney, Baxter D., & Son, Winchendon, Mass.

#### MACHINES, DEMAGNETIZING.

Demagnatool—Wm. Brewster Co., Inc., New York, N. Y.  
 Electric Brazing & Welding Machine Co., Inc., New York.

#### MACHINES, DIE CUTTING.

Hollingsworth, Wm., Baltimore, Md.

#### MACHINES, DIE FILING AND MILLING.

Haskins—R. G. Haskins Co., Chicago, Ill.  
 Illinois—Illinois Tool Works, Chicago, Ill.  
 Oliver of Adrian—Oliver Instrument Co., The, Detroit, Mich.  
 Rearwin—W. D. Rearwin, Grand Rapids, Mich.  
 Thurco—Thurston Mfg. Co., Providence, R. I.

#### MACHINES, DIE FORMING & MUELING.

Anderson Die Machine Co., Bridgeport, Conn.

#### MACHINES, DIE SINKING.

Coates Clipper Mfg. Co., Worcester, Mass.  
 Henry & Wright Mfg. Co., Hartford, Conn.  
 Jackson—Jackson Machine Tool Co., Jackson, Mich.  
 Keller—Keller Mechanical Engraving Co., Brooklyn, N. Y.  
 Modern Mfg. Co., Bridgeport, Conn.  
 Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Pratt & Whitney Co., Hartford, Conn.

#### MACHINERY, DISINTEGRATING.

Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, DITCHING.

American—American Hoist & Derrick Co., St. Paul, Minn. (railroad).  
 Browning Co., The, Cleveland, O.  
 Browning Engineering Co., Cleveland, O.  
 Buckeye—Buckeye Traction Ditcher Co., Findlay, O.  
 Dauber-Bell Machine Co., Oshkosh, Wis.  
 Gade—Gade Bros. Mfg. Co., Iowa Falls, Ia.  
 Marion Steam Shovel Co., The, Marion, Ohio.  
 Martin—Owensboro Ditcher & Grader Co., Inc., Owensboro, Ky.  
 Parsons—Parson, & Co., The, Newton, Ia.  
 Twenty Century—Baker Mfg. Co., The, Springfield, Ill.

#### MACHINERY, DOOR MAKING.

Dauber-Bell Machine Co., Oshkosh, Wis.

#### MACHINES, DOWEL PIN & ROD MAKING.

American Wood Working Mach. Co., Rochester, N. Y.  
 Bental & Margedant Co., Hamilton, O.  
 Dauber—Bell Machine Co., Oshkosh, Wis.  
 Cordesman, Rechlin Co., Cincinnati, O.  
 Hall & Brown Woodworking Mach. Co., St. Louis, Mo.  
 Hayes Machine Co., E. B., Oshkosh, Wis.  
 Goodspeed Machine Co., G. N., Winchendon, Mass.  
 Smith Machine Co., H. B., Smithville, N. J.  
 Over Mfg. Co., Chagrin Falls, Ohio.  
 Valley City Machine Works, Grand Rapids, Mich.

**MACHINES, DRAG SAW.**

- ◆ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
Howell—R. R. Howell & Co., Minneapolis, Minn.

**MACHINES, DRAFTING.**

- Noyes—Emmert Mfg. Co., Waynesboro, Pa.  
Universal Drafting Machine Co., Cleveland, O.

**MACHINERY, DRAWER, WOODEN.**

- Redin, Ekstrom & Co., Rockford, Ill.

**MACHINES, DRAWING.**

- Emmert—Emmert Mfg. Co., Waynesboro, Pa.

**MACHINERY, DREDGING.**

- Browning-Sommer-Adams Co., Cleveland, O.  
Earle Gear & Machine Co., The, Philadelphia, Pa.  
Elliott Machine Co., Baltimore, Md.  
Flory Mfg. Co., The, Bangor, Pa.  
Gade Bros. Mfg. Co., Iowa Falls, Ia.  
Industrial Supply Co., Keokuk, Ia.  
◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Jennings Pump & Dredge Co., Chicago, Ill.  
Link-Belt Company, Chicago and Philadelphia.  
Marion Steam Shovel Co., Marion, O.  
Morris—Morris Machine Works, Baldwinville, N. Y.  
National Equipment Co., The, Chicago, Ill.  
Norborn Engineering Co., Philadelphia, Pa.  
Power & Mining Machinery Co., New York, N. Y.  
Skinner Ship Building & Dry Dock Co., Baltimore, Md.  
Yuba—Yuba Mfg. Co., Marysville, Cal. (Metal mining)

**MACHINES, DRILLING, AUTOMATIC.**

- It's a Baker—Baker Bros., Toledo, O.

**MACHINES, DRILLING, BENCH.**

- Avey—Avey Drilling Machine Co., Covington, Ky.  
Barnes, F. W. & John, Co., Rockford, Ill.  
Boynton & Plummer, Inc., Chester Depot, Vt.  
◆ Buffalo Forge Co., Buffalo, N. Y.  
◆ Champion—Champion Blower & Forge Co., Lancaster, Pa.  
Cincinnati—Cincinnati Electrical Tool Co., Cincinnati, O.  
Cinti—W. H. Simmons & Co., Cincinnati, O.  
Davenport-Blissfield Motor Works, Blissfield, Mich.  
Demco Machine Tool Co., Cleveland, O.  
Emco—Enterprise Machinery Co., The, Chicago, Ill.  
Enterprise Machinery Co., The, Chicago, Ill.  
Goodell-Pratt Co., Greenfield, Mass.  
Hisey-Wolf Machine Co., Cincinnati, O.  
Hoefler Mfg. Co., Freeport, Ill.  
Leland-Gifford Co., Worcester, Mass.  
Millers Falls Co., New York, N. Y.  
Mundy, J. S., Holsting Engine Co., Newark, N. J.  
Pacific Machine Tool Co., Los Angeles, Calif.  
Pratt & Whitney Co., Hartford, Conn.  
Prentiss Tool & Supply Co., New York.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
Reed-Prentice Co., Worcester, Mass.  
Reed Co., Francis, Worcester, Mass.  
Rockford Drilling Machine Co., Rockford, Ill.  
Stearns & Co., E. C., Syracuse, N. Y.  
Stecher Co., The Chas., Chicago, Ill.  
Stow—Stow Manufacturing Co., Binghamton, N. Y.  
◆ U. S. Electrical Tool Co., Cincinnati, O.  
Welch, T. F., & Co., Boston, Mass.  
Winterhoff—Winterhoff Tool & Machine Co., Elkhart, Ind.  
Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

**MACHINES, DRILLING, BLACKSMITHS AND POST.**

- American Foundry & Mfg. Co., St. Louis, Mo.  
Aurora Tool Works Co., Aurora, Ind.  
Boynton & Plummer, Inc., Chester Depot, Vt.  
Buffalo Forge Co., Buffalo, N. Y.  
◆ Champion—Lancaster Blower & Forge Co., Lancaster, Pa.  
Cook—Standard Tool Co., Kalamazoo, Mich.  
Hargrave—Cincinnati Tool Co., Cincinnati, O.  
Little Giant—B. B. Noyes Co., Greenfield, Mass.  
Reed Co., Francis, Worcester, Mass.  
Salem Tool Co., The, Salem, O.  
Silver—The Silver Mfg. Co., Salem, O.  
Star—Star Forge Co., Buffalo, N. Y.  
Western Chief—Canedy-Otto Mfg. Co., Chicago, Ill.  
◆ Whitman & Barnes Mfg. Co., Akron, O.

**MACHINES, DRILLING, BLAST HOLE.**

- American Well Works, Aurora, Ill.  
Armstrong Mfg. Co., Waterloo, Iowa.  
The Clipper—Loomis Machine Co., Tiffin, O.  
Cyclone—Sanderson-Cyclone Drill Co., Orville, O.  
Diamond Machine Co., Providence, R. I.  
◆ Keystone—Keystone Driller Co., Beaver Falls, Pa.  
Salem Tool Co., The, Salem, O.  
Schramm—Chris. D. Schramm & Son, Inc., Philadelphia, Pa.  
Star Drilling Machine Co., Akron, O.

**MACHINES, DRILLING, BOILERMAKERS.**

- Bickford Drill & Tool Co., Cincinnati, O.  
Ingersoll-Rand Co., New York, N. Y.  
Niles-Bement-Pond Co., New York.

**MACHINES—DRILLING, BREAST, CHAIN AND HAND**  
(See also "Drills, Electrically Driven.")

- Boynton & Plummer, Inc., Chester Depot, Vt.  
Buckeye Vise Co., Cleveland, O.  
Chicago Flexible Shaft Co., New York.  
Coates Clipper Mfg. Co., Worcester, Mass.  
Duff—Upton & Gilman Machine Co., Lowell, Mass.  
Fray, John S., Co., The, Bridgeport, Conn.  
General Electric Co., Schenectady, N. Y.  
Goodell-Pratt Co., Greenfield, Mass.  
Helwig Mfg. Co., St. Paul, Minn.  
Hisey-Wolf Machine Co., Cincinnati, O.  
Irvington Mfg. Co., Irvington, N. J.  
Leetonia Tool Co., Leetonia, Ohio.  
Millers Falls Co., New York, N. Y.  
Peck, Stow & Wilcox Co., The, New York, N. Y.  
Rapid Fire—Steward & Romaine Mfg. Co., Philadelphia, Pa.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
Stow Mfg. Co., Binghamton, N. Y.  
◆ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.  
Yankee—North Bros Mfg. Co., Philadelphia, Pa.

**MACHINES, DRILLING, CLAMP.**

- Boynton & Plummer, Inc., Chester Depot, Vt.  
Goodell-Pratt Co., Greenfield, Mass.  
Reed Co., Francis, Worcester, Mass.  
Stow Flexible Shaft Co., Philadelphia, Pa.

**MACHINES, DRILLING, COAL.**

- Chicago Pneumatic Tool Co., New York.  
Clipper, Dreadnaught, Turbo—The Denver Rock Drill Mfg. Co., Denver, Colo.  
Cincinnati Electric Tool Co., Cincinnati, O.  
Howells Mining Drill Co., Plymouth, Pa.  
Ingersoll-Rand Co., New York.  
◆ Jeffrey Mfg. Co., The, Columbus, O.  
Leetonia Tool Co., The, Leetonia, O.  
Loomis Machine Co., Tiffin, O.  
Salem Tool Co., The, Salem, O.  
Scranton—Scranton Electric Construction Co., Scranton, Pa.  
Waugh—Denver Rock Drill Mfg. Co., Denver, Colo.

**MACHINES, DRILLING, CORR.**

- Calyx—Ingersoll-Rand Co., New York, N. Y.  
Crafts, Arthur A., Boston, Mass.  
National Forge & Tool Co., Irving, Pa.

**MACHINES, DRILLING, ELECTRIC DRIVEN, PORTABLE.**

- Arnold Electric Tool Co., Inc., New York, N. Y.  
Bilt-Rite—Bilt-Rite Equipment Co., Worcester, Mass.  
B. & D.—Black & Decker Mfg. Co., Baltimore, Md.  
Buffalo Forge Co., Buffalo, N. Y.  
Carver—American Electric Tool Co., W. Newton, Mass.  
Champion Blower & Forge Co., Lancaster, Pa.  
Cincinnati—Cincinnati Electrical Tool Co., Cincinnati, O.  
◆ Clark, Jr., Electric Co., Jas., Louisville, Ky.  
Dumore—Wisconsin Electric Co., Racine, Wis.  
◆ Duntley—Chicago Pneumatic Tool Co., New York, N. Y.  
Electro—Electro Magnetic Tool Co., Chicago, Ill.  
Fein—J. L. Gleason & Co., Boston, Mass.  
Glow Electric Co., The, Cincinnati, O.  
General Electric Co., Schenectady, N. Y.  
Haskins—R. G. Haskins, Chicago, Ill.  
Hisey-Wolf Machine Co., Cincinnati, O.  
Hard Service—The Van Dorn & Dutton Co., New York.  
Haskins, R. G., Chicago, Ill.  
Hole Shooter—A. H. Peterson Mfg. Co., Milwaukee, Wis.  
Howells Mining Drill Co., Plymouth, Pa.  
Ideal—Niel & Smith Electric Tool Co., The, Cincinnati, Ohio.  
Independent Pneumatic Tool Co., Chicago, Ill.  
Lovejoy Tool Works, Chicago, Ill.  
McKay, Geo. C., Cincinnati, Ohio.  
Oil Well Supply Co., Pittsburgh, Pa.  
One-Hand-Y—Knight Engineering & Sales Co., Los Angeles, Cal.  
Peerless—Cincinnati Electric Tool Co., Cincinnati, O.  
Power King—Jones, MacNeal & Camp, Chicago, Ill.  
Simplex Mfg. Co., Newtonville, Mass.  
Standard Electric Tool Co., The, Cincinnati, O.  
Stow—Stow Mfg. Co., Binghamton, N. Y.  
Temco—The Temco Electric Motor Co., Leipsic, O.  
Thor—Independent Pneumatic Tool Co., Chicago, Ill.  
◆ U. S. Electrical Tool Co., Cincinnati, O.  
Van Dorn Electric Tool Co., Cleveland, O.  
Wodack—Wodack Electric Tool Corp., Chicago, Ill.

**MACHINES, DRILLING, ELECTRIC, FLOOR.**

Cincinnati—Cincinnati Electrical Tool Co., Cincinnati, O.  
Hisey-Wolf Machine Co., Cincinnati, O.

**MACHINES, DRILLING, FLEXIBLE SHAFT.**

(See also Drills, Electrically Driven.)

- ◆ Chicago General Purpose Machine—Chicago Flexible Shaft Co., Chicago, Ill.
- Gem—Gem Mfg. Co., Pittsburgh, Pa.
- Plank Flexible Shaft Machine Co., Grand Rapids, Mich.
- Stow Flexible Shaft Co., Philadelphia, Pa.
- Stow Mfg. Co., Inc., Binghamton, N. Y.

**MACHINES, DRILLING, FRICTION DISC DRIVE.**

Allen Friction—Allen Wrench & Tool Co., Providence, R. I.  
All Geared—Barnes Drill Co., Rockford, Ill.

**MACHINES, DRILLING, FOR GAS AND WATER MAINS.**

- ◆ Hay's—Hays Mfg. Co., Erie, Pa.

**MACHINES, DRILLING, GUN BARREL.**

Victor—International Engineering Co., Cleveland, O.

**MACHINES, DRILLING, HEAVY DUTY.**

Avey—Avey Drilling Machine Co., Covington, Ky.  
Colburn—Colburn Machine Tool Co., Cleveland, O.  
Defiance Machine Works, Defiance, Ohio.  
Footburt—The Foote-Burt Co., Cleveland, O.  
It's a Baker—Baker Bros., Toledo, Ohio.

**MACHINES, DRILLING, HORIZONTAL.**

Barnes, W. T. & John, Co., Rockford, Ill.  
Barnes Drill Co., Inc., Rockford, Ill.  
Betts Machine Co., Inc., Rochester, N. Y.  
Cadillac Tool Co., The, Detroit, Mich.  
Carroll Foundry & Machine Tool Co., Bucyrus, O.  
Cleveland Machine Tool Co., Cleveland, O.  
G. & L.—Giddings & Lewis Machine Tool Co., Fond du Lac, Wis.  
Mechanics—Rockford Drilling Machine Tool Co., Rockford, Ill.  
Milwaukee—Milwaukee Electric Crane & Mfg. Co., Milwaukee, Wis.  
Morris—Morris Machine Tool Co., Cincinnati, Ohio.  
Pawling & Harnischfeger, Milwaukee, Wis.

**MACHINES, DRILLING, JOIST.**

Dikeman Mfg. Co., Norwalk, Conn.

**MACHINES, DRILLING, MULTIPLE SPINDLE OR GANG.**

American Tool Works Co., Cincinnati, O.  
All Geared—Barnes Drill Co., Inc., Rockford, Ill.  
Avey—Avey Drilling Machine Co., Covington, Ky.  
Barnes Co., W. F. & John, Rockford, Ill.  
Bausch Machine Tool Co., Brightwood, Mass.  
Buckeye Drill & Lathe Co., The, Columbus, O.  
Carlton Machine Tool Co., Cincinnati, Ohio.  
Cincinnati—Cincinnati Automatic Machine Co., Cincinnati, O.  
Cincinnati Bickford Tool Co., The, Oakley, O.  
Cincinnati Pulley Machinery Co., Cincinnati, O.  
Cleveland Punch & Shear Work Co., Cleveland, O.  
Cleveland—The Simplex Machine Tool Co., Cleveland, O.  
Colburn Machine Tool Co., Franklin, Pa.  
Defiance Machine Works, The, Defiance, Ohio.  
Demco Machine Tool Co., Cleveland, O.  
Detrick & Harvey Machine Co., Baltimore, Md.  
Dreses' Machine Tool Co., Cincinnati, O.  
Dwight Slate—Standard Mfg. Co., Bridgeport, Conn.  
Fenn's—Fenn Mfg. Co., Hartford, Conn.  
Fitchburg Machine Works, Fitchburg, Mass.  
Foote-Burt Co., The, Cleveland, O.  
Fox Machine Co., Inc., Jackson, Mich.  
Frevort Machinery Co., New York.  
Greenlee Bros. & Co., Rockford, Ill.  
Hamilton Machine Tool Co., The, Hamilton, O.  
Hardinge Bros., Inc., Chicago, Ill.  
Harrington, Sons & Co., Edwin, Philadelphia.  
Hill—Thomas Spacing Machine Co., Pittsburgh, Pa.  
Henry & Wright Mfg. Co., Hartford, Conn.  
Hilbert—Hilbert Machine Co., Cincinnati, O.  
Hoefler Mfg. Co., Freeport, Ill.  
Hole Hog—Moline Tool Co., Moline, Ill.  
It's a Baker—Baker Bros., Toledo, O.  
Landau Turret—J. N. Landau, New York.  
Langeller Mfg. Co., Arlington, Cranston, R. I.  
Leland-Gifford Co., Worcester, Mass.  
Lima Drill Press Co., Lima, O.  
McCabe, J. J., New York, N. Y.  
Mechanics—Rockford Machine Tool Co., Rockford, Ill.  
Michigan—National Foundry & Machine Co., Ypsilanti, Mich.  
Mueller—Mueller Machine Tool Co., Cincinnati, O.  
Namco—National Acme Co., The, Cleveland, O.  
National Acme Co., The, Cleveland, O.

National Automatic Tool Co., Richmond, Ind.  
Newton Machine Tool Works, Inc., Philadelphia.  
Niles-Bement-Pond Co., New York, N. Y.  
Pawling & Harnischfeger, Milwaukee, Wis.  
Peerless—Cincinnati Electric Tool Co., Cincinnati, O.  
Pratt & Whitney Co., Hartford, Conn.  
Reed Co., Francis, Worcester, Mass.  
Reed-Prentice Co., Worcester, Mass.  
Richards Machine Co., Milwaukee, Wis.  
Rockford Drilling Machine Co., Rockford, Ill.  
Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
Sellew—Sellew Machine Tool Co., Pawtucket, R. I.  
Sibley Machine Co., South Bend, Ind.  
Silver's—Silver Mfg. Co., The, Salem, O.  
Standard Mfg. Co., Bridgeport, Conn.  
Taylor—Robbins Machine Co., Worcester, Mass.  
Taylor & Fenn Co., Hartford, Conn.  
Turner Machine Co., Danbury, Conn.  
United States Drill Head Co., The, Cincinnati, O.  
Valley City Machine Works, Grand Rapids, Mich.  
Wells, Frank L., Co., Kenosha, Wis.  
◆ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.  
Windsor Machine Co., Windsor, Vt.  
Wolverine Caster Co., Traverse City, Mich.

**MACHINES, DRILLING, PNEUMATIC.**

- Allen Co., John T., New York, N. Y.
- American Air Compressor Works, Brooklyn, N. Y.
- ◆ Baird Pneumatic Tool Co., Topeka, Kan.
- ◆ Boyer—Chicago Pneumatic Tool Co., New York, N. Y.
- Calyx—Ingersoll-Rand Co., New York, N. Y.
- Canton—Canton Pneumatic Tool Co., Canton, O.
- Cleveland Pneumatic Tool Co., Cleveland, O.
- Clipper, Dreadnaught, Turbo—Denver Rock Drill Mfg. Co., Denver, Colo.
- Crown & Imperial—Ingersoll-Rand Co., New York.
- Helwig—Helwig Mfg. Co., St. Paul, Minn.
- Ingersoll-Rand Co., New York, N. Y.
- Kane & Roach, Syracuse, N. Y.
- Keller-Master—Keller Pneumatic Tool Co., Grand Haven, Mich.
- Kotten Co., H. G., Jersey City, N. J.
- Monarch Pneumatic Tool Co., St. Louis, Mo.
- Standard Railway Equipment Co., Chicago, Ill.
- Stow Flexible Shaft Co., Philadelphia, Pa.
- Sullivan Machinery Co., Chicago, Ill.
- Thor—Independent Pneumatic Tool Co., Chicago, Ill.
- Titan—Titan Automatic Tool Co., New York, N. Y.

**MACHINES, DRILLING, PROSPECTING.**

American Well Works, Aurora, Ill.  
Armstrong, Kelly Tanneyhill, Waterloo—Armstrong Mfg. Co., Waterloo, Iowa.  
Calyx Diamondless—Ingersoll-Rand Co., New York, N. Y.  
Clipper-Loomis Machine Co., Tiffin, O.  
Crown & Imperial—Ingersoll-Rand Co., New York.  
Cyclone—The Cyclone Drill Co., Orrville, O.  
Denver Rock Drill Mfg. Co., Denver, Colo.  
◆ Keystone Driller Co., Beaver Falls, Pa.  
Loomis Machine Co., Tiffin, O.  
Sullivan Machinery Co., Chicago, Ill.

**MACHINES, DRILLING, RADIAL.**

Avey—Avey Drilling Machine Co., Covington, Ky.  
Carlton Machine Tool Co., Cincinnati, O.  
Conradson—Conradson Machine Tool Co., Green Bay, Wis.  
Fosdick—The Fosdick Machine Tool Co., Cincinnati, O.  
Hammond—Hammond Mfg. Co., The, Cleveland, O.  
Hoosier—Hoosier Drilling Machine Co., Goshen, Ind.  
McCabe, J. J., Lathe & Mach'y Corp., New York.  
Milwaukee—Hanna Engineering Works, Chicago, Ill.  
Morris—Morris Machine Tool Co., The, John B., Cincinnati, O.  
Reed-Prentice Co., Worcester, Mass.  
Silver—Silver Mfg. Co., Salem, O.  
Taylor & Fenn Co., Hartford, Conn.  
Western Machine Tool Works, Holland, Mich.  
Wisconsin—Dauber-Kratsch Co., Oshkosh, Wis.

**MACHINES, DRILLING, RAILWAY TRACK.**

(See also "Ratchets" and "Drills, Twist.")

- Beland Improved—Acme Truck & Tool Co., St. Louis, Mo.
- Beland—Handlan-Buck Mfg. Co., St. Louis, Mo.
- Bilt-Rite—Bilt-Rite Equipment Co., Worcester, Mass.
- Boynton & Plummer, Inc., Chester Depot, Vt.
- Paulus Wilson—The Buda Co., Chicago, Ill.
- Champion—Handlan-Buck Mfg. Co., St. Louis, Mo.
- Chicago Pneumatic Tool Co., New York.
- Climax—National Standard Co., Niles, Mich.
- Cook—National Standard Co., Niles, Mich.
- Detroit Twist Drill Co., Detroit, Mich.
- Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Giant—The Keystone Mfg. Co., Buffalo, N. Y. (ratchet).
- Goodell-Pratt Co., Greenfield, Mass.

Groff's—Prince-Groff Co., Camden, N. J.  
 Hyduty Buda—Buda Co., The, Chicago, Ill.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Lightning—Topping Bros., New York, N. Y.  
 Lovejoy Tool Works, Chicago, Ill.  
 Millers Falls Co., New York, N. Y.  
 National Standard Co., Niles, Mich.  
 Noble—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Paulus—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Standard—Aldon Company, The, Chicago, Ill.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Stow Mfg. Co., Inc., Binghamton, N. Y.  
 Underwood—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Waterman—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Wedglok—Prince-Groff Co., The, New York, N. Y.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.  
 Wilson—The Buda Co., Chicago, Ill.

#### MACHINES, DRILLING, ROCK, AIR, STEAM AND ELECTRIC.

Abenaque—Abenaque Machinery Works, Westminster Station, Vt.  
 Busy Bee—McKiernan-Terry Drill Co., New York.  
 Clark, H. W., Co., Mattoon, Ill.  
 Clipper, Dreadnaught, Turbo—Denver Rock Drill Manufacturing Co., Denver, Colo.  
 Cochise Machine Co., Los Angeles, Cal.  
 Deitz Airoelectric—Standard Engineering & Machinery Co., Denver, Colo.  
 General Electric Co., Schenectady, N. Y.  
 Hardscog—Hardscog Wonder Drill Co., Ottumwa, Ia.  
 Holman—The Mine & Smelter Supply Co., Salt Lake City, Utah.  
 Howells—Howell Mining Drill Co., Plymouth, Pa.  
 Ingersoll-Rand Co., New York, N. Y. Trade names, Butterfly, Clinkerbreaker, Concrete Breaker, Electric Air, I. R. Water Hammer Drifter, Jackhammer, Sergeant, Stopehomer, Submarine.  
 Jackhamer—Ingersoll-Rand Co., New York, N. Y.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Leyner Ingersoll—Ingersoll-Rand Co., New York, N. Y.  
 Little Giant—Chicago Pneumatic Tool Co., New York.  
 Little Giant—Ingersoll-Rand Co., New York, N. Y.  
 Loomis Machine Co., Tiffin, O.  
 McKiernan-Terry Drill Co., New York.  
 New Ingersoll—Ingersoll-Rand Co., New York, N. Y.  
 Nixon, Ratchet—Nixon Mining Drill Co., Chattanooga, Tenn.  
 Pneumoelectric—Pneumoelectric Corp., The, Syracuse, N. Y.  
 Schramm—Chris D. Schramm & Son, Inc., Philadelphia, Pa.  
 Scott Drill Co., St. Louis, Mo.  
 Scranton—Scranton Electric Construction Co., Scranton, Pa.  
 Sebec—Star Expansion Bolt Co., New York, N. Y.  
 Sergeant Auxiliary Valve—Ingersoll-Rand Co., New York, N. Y.  
 S. H.—Hughes Tool Co., Houston, Tex. (Bits.)  
 Standard Diamond Drill Co., Chicago, Ill.  
 Stopehomer—Ingersoll-Rand Co., New York, N. Y.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Sullivan Machinery Co., Chicago, Ill. (air or steam).  
 Temple—Ingersoll-Rand Co., New York, N. Y.  
 Waugh—Denver Rock Drill & Machinery Co., Denver, Colo. (Air and steam.)  
 W. C. Carver—Carver Tool Works, Spring Valley, N. Y.  
 Wood—Morris Wood Sons, Chicago, Ill.

#### MACHINES, DRILLING SALAMANDER FOR STEEL MILLS.

Stow Mfg. Co., Binghamton, N. Y.

#### MACHINES, DRILLING, SEMI-AUTOMATIC.

Detroit Machine Tool Co., Detroit, Mich.

#### MACHINES, DRILLING, SENSITIVE.

Allen Machine Co., Cleveland, O.  
 Ames—B. C. Ames & Co., Waltham, Mass.  
 Avey—Avey Drilling Machine Co., Covington, Ky.  
 Berghauser Machine Co., Cincinnati, O.  
 Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
 Buckeye Drill & Lathe Co., The, Columbus, O.  
 Burk Machine Tool Co., The, Conneaut, Ohio.  
 Carlton Machine Tool Co., Cincinnati, O.  
 Cleveland Lathe & Machinery Co., Cleveland, O.  
 Demco—Demco Machine Tool Co., Cleveland, O.  
 Dumore—Wisconsin Electric Co., Racine, Wis.  
 Edlund—Edlund Machinery Co., Inc., Cortland, N. Y.  
 Elgin Tool Works, Elgin, Ill.  
 Excelsior, Ideal—Henry Frank, Jr., New York, N. Y.  
 Fox Machine Co., Grand Rapids, Mich.  
 Fosdick—The Fosdick Machine Tool Co., Cincinnati, O.  
 Gang Co., The Wm. E., Cincinnati, O.  
 Gardam & Son, Wm., New York, N. Y.  
 General Electric Co., Schenectady, N. Y.  
 Henry & Wright Mfg. Co., Hartford, Conn.  
 Herbert, Alfred, Ltd., New York, N. Y.  
 H. G. Barr—Reed Drill Co., Worcester, Mass.  
 High Speed Hammer Co., Rochester, N. Y.

Hoefler Mfg. Co., Freeport, Ill.  
 Hoysradt & Case, Kingston, N. Y.  
 Johnson—Johnson Machine Tool Co., Gouverneur, N. Y.  
 Knecht Bros. Co., The, Cincinnati, O.  
 Knight, W. B., Machine Co., St. Louis, Mo.  
 Langelier Mfg. Co., Arlington, Cranston, R. I.  
 Leland-Gifford Co., Worcester, Mass.  
 Lindgren—F. W. Lindgren Co., Rockford, Ill.  
 Minster Machine Co., Minster, O.  
 Myers—Myers Machine Tool Corp., Columbus, O.  
 Oliver Mfg. Co., The W. W., Buffalo, N. Y.  
 Olmsted's—L. H. Olmsted Mfg. Co., New York, N. Y.  
 Pecorp—Providence Engineering Corp., Providence, R. I.

Pratt & Whitney Co., Hartford, Conn.  
 Quint, A. D., Hartford, Conn.  
 Reed, Francis & Co., Worcester, Mass.  
 Royersford Foundry & Machine Co., Philadelphia.  
 St. Louis Machine Tool Co., St. Louis, Mo.  
 Sigourney Tool Co., The, Hartford, Conn.  
 Silver—Silver Mfg. Co., Salem, O.  
 Stecher Co., Chas., The, Chicago, Ill.  
 Stow Mfg. Co., Binghamton, N. Y.  
 Western Machine Tool Works, Holland, Mich.  
 ♦ Willey—Jas. Clark, Jr., Electric Co., Louisville, Ky.

#### MACHINES, DRILLING, SUBMARINE.

Ingersoll-Sergeant—Ingersoll-Rand Co., New York.

#### MACHINES, DRILLING, TOOL ROOM.

Albany Hardware Specialty Mfg. Co., Albany, Wis.

#### MACHINES, DRILLING, UPRIGHT.

All Geared—Barnes Drill Co., Rockford, Ill.  
 Aurora Tool Works, The, Aurora, Ind.  
 Barnes Drill Co., Rockford, Ill.  
 Barnes, W. F. & John, Co., Rockford, Ill.  
 Boynton & Plummer, Inc., Chester Depot, Vt.  
 Buckeye Drill & Lathe Co., The, Columbus, O.  
 Canedy-Otto—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
 ♦ Champion—Champion Blower & Forge Co., Lancaster, Pa.  
 Cincinnati Bickford Tool Co., The, Oakley, O.  
 Cinti—W. H. Simmons & Co., Cincinnati, O.  
 Cleveland—Simplex Machine Tool Co., The, Cleveland, O.  
 Colburn Machine Tool Co., Franklin, Pa.  
 Davis, W. P., Machine Co., Rochester, N. Y.  
 Fosdick—Fosdick Machine Tool Co., Cincinnati, O.  
 Gould & Eberhardt, Newark, N. J.  
 Hamilton Machine Tool Co., The, Hamilton, O.  
 Harrington, Edwin, Son & Co., Philadelphia, Pa.  
 Hoefler—Hoefler Mfg. Co., Freeport, Ill.  
 It's a Baker—Baker Bros., Toledo, O.  
 Mechanics Tool Co., Rockford, Ill.  
 Milwaukee—Richards Machine Co., Milwaukee, Wis.  
 New Haven Mfg. Co., New Haven, Conn.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Rockford Drilling Machine Co., Rockford, Ill.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Sibley Machine Tool Co., South Bend, Ind.  
 Silver—Silver Mfg. Co., Salem, O.  
 Snyder, J. E., & Son, Worcester, Mass.  
 Stecher, Chas., Co., The, Chicago, Ill. (Deep hole.)  
 Superior & Kokomo—Superior Machine Tool Co., The, Kokomo, Ind.  
 Weigel Machine Tool Co., Peru, Ind.  
 Whitney Mfg. Co., Hartford, Conn.  
 Wisconsin—Dauber-Kratsch Co., Oshkosh, Wis.

#### MACHINERY, DROP FORGING.

(See "Hammers, Power," "Furnaces," etc.)

#### MACHINES, DYEING, FOR ALL MATERIALS.

Proctor Dryers—Philadelphia Textile Machinery Co., Philadelphia, Pa.

#### MACHINES, DYEING OUT, CENTRIFUGAL.

American Tool & Machine Co., Boston, Mass.  
 Baird Machine Co., Bridgeport, Conn.  
 Black-Clawson Co., The, Hamilton, Ohio.  
 Link-Belt Company, Chicago and Philadelphia.  
 Ruggles-Coles Engineering Co., New York, N. Y.  
 Tolhurst Machine Wks., Troy, N. Y.

#### MACHINES, DYEING.

Clenzall Machine Co. of America, St. Louis, Mo.  
 Hussory Dyeing Machine Co., Groveville, N. J.  
 Hustler—Salem Iron Works, Winston-Salem, N. C.  
 Townsend Furnace & Machine Shop Co., Albany, N. Y.

#### MACHINERY, ELEVATING AND CONVEYING.

Acme Road Machinery, Frankfort, N. Y.  
 A. C. Co.—Arnold-Creager Co., The, New London, Ohio.  
 American Clay Machinery Co., Bucyrus, O.  
 American Tool & Machine Co., Boston, Mass. (ribbons scroll).

# CENTRIFUGAL DRYING OUT



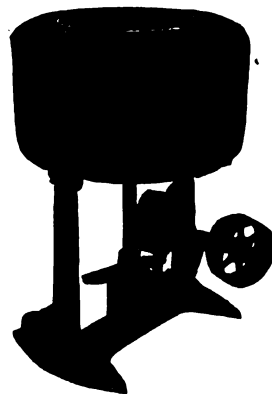
Removable  
Basket

An extractor with special straight basket and inner basket for drying small pieces that have been coated, dipped, japanned, painted, plated or washed.

Established 1843

## AMERICAN TOOL & MACHINE CO.

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Auto Piler, Brown Portable, H-a-n-d-l-i-f-t—Brown  
Portable Conveying Mach. Co., Chicago.  
Ill.

Barnard & Leas Mfg. Co., Moline, Ill.  
Bartlett & Snow Co., The C. O., Cleveland, O.  
Batavia Engineering Works, Batavia, Ill.  
Bailey-Burruss Mfg. Co., Atlanta, Ga.  
Buhl Malleable Co., Detroit, Mich.  
Caldwell & Son Co., H. W., Chicago, Ill.  
Chain Belt Co., Milwaukee, Wis.  
Chicago Conveyor Co., Chicago, Ill.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Codd, E. J., Co., Baltimore, Md.  
Connellsville Machine & Car Co., Connellsville, Pa.  
Cross Engineering Co., Carbondale, Pa.  
Cotton States Belting & Supply Co., Atlanta, Ga.  
♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
Farnham Mfg. Co., Buffalo, N. Y.  
Filer & Stowell Co., Milwaukee, Wis.  
Gifford-Wood Co., Hudson, N. Y.  
Godfrey—The Godfrey Conveyor Co., Elkhart, Ind.  
Harris, C. S., Co., Rome, N. Y.  
Hesse-Martin Iron Works, Portland, Ore.  
♦ Hill Clutch Co., Cleveland, O.  
Howe Chain Co., Muskegon, Mich.  
Howell—R. R. Howell & Co., Minneapolis, Minn.  
Hunt Co., C. W., New York, N. Y.  
Imperial—Pratt Engineering & Machine Co., Atlanta, Ga.  
♦ Jeffrey—Jeffrey Mfg. Co., The, Columbus, O.  
Jones, W. A., Fdy. & Mach. Co., Chicago, Ill.  
Kennedy-Van Saun Mfg. & Eng. Co., New York.  
Lammert & Mann Co., Chicago, Ill.  
Lamson Co., Boston, Mass.  
Lehr—Stephens-Adamson Mfg. Co., Aurora, Ill.  
Lewistown Foundry & Machine Co., Lewistown, Pa.  
Link-Belt Company, Chicago and Philadelphia.  
Link Belt Supply Co., Minneapolis, Minn.  
Lowerator—Lowerator Co., Inc., Brooklyn, N. Y.  
McCaslin—Mead-Morrison Mfg. Co., Boston, Mass.  
McKinney Harrington Co., N. Chicago, Ill.  
Main Belting Co., Philadelphia, Pa.  
Maine Electric Co., Portland, Me.  
Mathews Gravity Carrier Co., Ellwood City, Pa.  
Meese & Gottfried Co., San Francisco, Cal.  
Mey—Mey Chain Belt Co., Buffalo, N. Y.  
Pioneer—Mansfield Engineering Co., Indianapolis, Ind.  
Pioneer—Taplin-Rice-Clerkin Co., Akron, O. (gravity).  
Pittsburgh Conveying Machinery Co., Pittsburgh, Pa.  
Power & Mining Machinery Co., New York, N. Y.  
Puget Sound Machinery Depot, Seattle, Wash.  
Pyott, Geo. W., Co., Chicago, Ill.  
Reliable—Universal Road Machinery Co., Kingston, N. Y.  
Robins Conveying Belt Co., New York.  
♦ Salem—Geo. W. Moore Co., Chicago, Ill.  
♦ Skillin & Richards Mfg. Co., Chicago, Ill.  
♦ Standard Sand & Machine Co., Cleveland, O.  
Stephens-Adamson Mfg. Co., Aurora, Ill.  
Stine, S. B., Osceola Mill, Pa. (gravity).  
Stine, J. C., Co., Tyrone, Pa.  
Sturtevant Mill Co., Boston, Mass.  
Telsmith—Smith Engineering Works, Milwaukee, Wis.  
Union Iron Works, Decatur, Ill.  
♦ Webster Mfg. Co., Chicago, Ill.  
Weller Mfg. Co., Chicago, Ill.  
Wellman-Reaver-Morgan Co., Cleveland, O.  
Wolfe—The Wolfe Co., Chambersburg, Pa.

### MACHINERY, ELEVATOR, VERTICAL TRAY.

Lansing Co., Lansing, Mich.  
Lowerator Co., Inc., Brooklyn, N. Y.

### MACHINERY, ENVELOPE.

Bickett Machine & Mfg. Co., Cincinnati, O.  
Diets Machine Works, Philadelphia, Pa.

Kidder, R. E. Co., Worcester, Mass.  
Royal Machine Co., Newark, N. J.

### MACHINES, EMBROIDERING, CHAMOISSETTING COTTON.

Duplex—Duplex Moulding Sander Co., Hornell, N. Y.

### MACHINES, ERASING, ELECTRIC.

Kolesch Co., New York, N. Y.

### MACHINERY, EXCAVATING.

(See also "Excavators.")

Bay City Dredge Works, Bay City, Mich.  
Marion Steam Shovel Co., Marion, O.  
Union Engineering Co., Cleveland, O.

### MACHINES, EXCELSIOR CUTTING.

American—American Saw Mill Machinery Co., Hack-  
ettstown, N. J.  
Chattanooga Machinery Co., Chattanooga, Tenn.  
Kline's—Kline, Lewis T., Alpena, Mich.

### MACHINES, EYELETING AND GROMMETING.

Ajax Machine Appliance Corp., Brooklyn, N. Y.  
Baird Machine Co., Bridgeport, Conn.  
Blake & Johnson Co., Waterbury, Conn.  
Dallas Brass & Copper Co., Chicago, Ill.  
Harris—Harris Engineering Co., Bridgeport, Conn.  
Stimson, Edwin B., Co., New York, N. Y.

### MACHINES, FABRIC ROSE AND INSULATING.

Royle—John Royle & Sons, Paterson, N. J.

### MACHINES, FACE GRINDING, HEAVY.

Diamond Machine Co., Providence, R. I.

### MACHINES, FACING, THREE HEAD.

General Grinding Wheel Corp., Philadelphia, Pa.

### MACHINERY, FELT, LEATHER AND CLOTH CUTTING.

Redin Ekstrom & Co., Rockford, Ill.

### MACHINERY, FERTILIZER.

Bailey-Burruss Mfg. Co., Atlanta, Ga.  
Bartlett & Snow Co., The C. O., Cleveland, O.  
Bradley Pulverizer Co., Allentown, Pa.  
♦ Chain Belt Co., Milwaukee, Wis.  
♦ Howe Chain Co., Muskegon, Mich.  
♦ Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Pratt Engineering & Machine Co., Atlanta, Ga.  
Stroud, E. H., & Co., Chicago, Ill.  
Sturtevant Mill Co., Boston, Mass.  
Valk & Murdock Iron Works, Charleston, S. C.  
Williams Patent Crusher & Pulverizer Co., St. Louis, Mo.

### MACHINES, FILING, SAWMILL AND MACHINE SHOP.

Ames—B. C. Ames & Co., Waltham, Mass.  
Barry—Barry Mfg. Co., Chicago, Ill.  
Black Diamond Saw & Mach. Works, Natick, Mass.  
Cochrane-Bly Co., Rochester, N. Y.  
Colton—Arthur Colton Co., Detroit, Mich.  
Detrick & Harvey Machine Co., Baltimore, Md.  
Hartford—Robinson Tool Works, Inc., The, Waterbury, Conn. (die).  
Henderson, W. K., Iron Works & Supply Co., Shreve-  
port, La.  
Henry & Wright Mfg. Co., Hartford, Conn.  
Holmes—Holmes Mfg. Co., Shelton, Conn.



Illinois Tool Works, Chicago, Ill.  
 Johnson & Biddle Tool Co., Elkhart, Ind.  
 ♦ Machinery Co. of America, Big Rapids, Mich.  
 Noble & Westbrook Mfg. Co., Hartford, Conn.  
 Simplex—Extensive Mfg. Co., The, New York, N. Y.

#### MACHINES, FLANGING.

Bliss, E. W. & Co., Brooklyn, N. Y.  
 Grant—Grant Mfg. & Machine Co., Bridgeport, Conn.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Lovekin—Lovekin Pipe Expanding & Flanging Machine Co., Philadelphia, Pa.  
 Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
 Ryerson, Jos. T., & Son, Chicago, Ill.  
 Wood, R. D., & Co., Philadelphia, Pa.

#### MACHINES, FLEXIBLE TUBE.

Sleeper & Hartley, Inc., Worcester, Mass.

#### MACHINERY, FLOOR CLOTH AND LINOLEUM.

♦ Moore & White Co., The, Philadelphia, Pa.

#### MACHINES, FLOOR SCRUBBING AND POLISHING.

Badger—Wisconsin Fdy. & Machine Co., Madison, Wis.  
 Connorsville—Landers, Frary & Clark, United Vacuum Appliance Div., Connorsville, Ind.  
 Finnell System—American Scrubbing Equipment Co., Chicago, Ill.  
 Kelley Junior, Kelley Floor Machine—Kelley Electric Machine Co., Buffalo, N. Y.  
 Schlueter Improved Rapid—M. L. Schlueter, Chicago, Ill.

#### MACHINERY, FLOUR, CEREAL AND FEED MILL.

(See also Mills, Feed and Meal.)

Allis-Chalmers Co., Milwaukee, Wis.  
 Alton Mill Furnishing Co., Alton, Ill.  
 American Midget Marvel—Anglo-American Mill Co., The, Owensboro, Ky.  
 Bailey-Burruss Mfg. Co., Atlanta, Ga.  
 Barnard Mfg. Co., Spokane, Wash.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Cape Mill Mfg. Co., Cape Girardeau, Mo.  
 Eureka—S. Howes Co., The, Silver Creek, N. Y.  
 Great Western Mfg. Co., Leavenworth, Kan.  
 Gyrator System—The Wolf Co., Chambersburg, Pa.  
 Knoxville—Tv-Sa-Man Machine Co., Knoxville, Tenn.  
 Munson—Mill Machinery Co., Inc., Utica, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Ross, The J. J., Mill Furnishing Co., Portland, Ore.  
 Salem Foundry & Machine Works, Salem, Va.  
 Simon, Buhler & Baumann, Inc., New York.  
 Simpson-Orville Co., The, Cincinnati, O.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Strong—Scott Mfg. Co., Minneapolis, Minn.  
 Sunflower—Montpeller Cup & Metal Works, Montpeller, Ind.  
 Superior—Moline Mill Mfg. Co., The, Moline, Ill.  
 Twentieth Century Mill Mfg. Co., Decatur, Ill.  
 Unique—Robinson Mfg. Co., Muncy, Pa.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 Wolf, Augustus, Chambersburg, Pa.  
 Wolf-Wilmarth & Morman Co., Grand Rapids, Mich.  
 Wolf Co., The, Chambersburg, Pa.  
 Ypsilanti Machine Works, Ypsilanti, Mich.

#### MACHINES, FLUE WELDING.

(See also "Welders, Flue Pneumatic.")

Federal Machine & Welder Co., Warren, O.  
 McLeod Co., The, Cincinnati, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Stroud, E. H., & Co., Chicago, Ill.

#### MACHINES, FORGING.

Acme Machinery Co., Cleveland, O.  
 Beaudry & Co., Boston, Mass.  
 Bliss Co., E. W., Brooklyn, N. Y.  
 Cleveland Knife & Forge Co., Cleveland, O.  
 Hydraulic Press Mfg. Co., Mount Gilead, O.  
 Merrill Bros., Brooklyn, N. Y.  
 Mesta Machine Co., Pittsburg, Pa.  
 Morgan Engineering Co., Alliance, O.  
 National Machinery Co., Tiffin, O.  
 Rock River Machine Co., Jamesville, Wis.  
 Toledo Machine & Tool Co., Toledo, O.  
 United Engineering & Foundry Co., Pittsburg, Pa.  
 Waterbury Farrel Foundry & Machinery Co., Waterbury, Conn.  
 Williams, White & Co., Moline, Ill.

#### MACHINES, FORMING AND BENDING.

Atlas Machine Co., The, Waterbury, Conn.  
 Badger State Machine Works, Beloit, Wis.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hinman, D. A., & Co., Sandwich, Ill.  
 Hydraulic Press Mfg. Co., Mount Gilead, O.  
 Konigslow Stamping & Tool Works, E. Cleveland, O.

Niagara Machine & Tool Works, Buffalo, N. Y.  
 Rock River Machine Co., Jamesville, Wis.  
 Shuster, F. B., Co., New Haven, Conn.  
 Watson-Stillman Co., Aldene, N. J.

#### MACHINERY, FREIGHT & PACKAGE HANDLING.

Cleveland Crane & Engineering Co., Wickliffe, O.  
 Jeffrey Mfg. Co., The, Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Otis Elevator Co., New York, N. Y.

#### MACHINERY, GARBAGE DISPOSAL.

(See also "Burners, Garbage.")

Bartlett & Snow Co., The C. O., Cleveland, O.  
 Kutztown Foundry & Machine Co., Kutztown, Pa.  
 Union Engineering Co., The, Cleveland, O.

#### MACHINES, GASOLINE GAS GENERATING.

Acme—Chicago Solar Light Co., Chicago, Ill.  
 Airlight—Acorn Brass Mfg. Co., Chicago, Ill.  
 American Automatic—American Gas Machine Co., Albert Lea, Minn.  
 American Junior—American Gas Machine Co., Albert Lea, Minn.  
 Best—The Best Light Co., Canton, O.  
 Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Combination—Detroit Heating & Lighting Co., Detroit, Mich.  
 Daugherty, W. E., Princeton, Ind.  
 Denny's Imperial, Climax—Climax Mach. & Burner Co., Newark, N. J.  
 Detroit Heating & Lighting Co., Detroit, Mich.  
 Economy—Economy Gas Machine Co., Rochester, N. Y.  
 F.-P.—The Incandescent Light & Stove Co., Cincinnati, O.  
 Hawkeye—Hawkeye Mfg. Co., Waterloo, Ia.  
 Herz Junior—Herz Mfg. Co., St. Paul, Minn.  
 King—King Light Co., Peoria, Ill.  
 Koppers Company, Pittsburg, Pa.  
 Matlack—W. H. Matlack, Louisville, Ky.  
 Matthews—Matthews Gas Machine Co., Chicago, Ill.  
 Morgan Construction Co., Worcester, Mass.  
 Perfection—Speer Gas Machine Mfg. Co., Los Angeles, Cal.  
 Practical Gas Engine & Machine Works, North Chicago, Ill.  
 Royal—Pennsylvania Globe Gas Light Co., Philadelphia, Pa.  
 Severance—Severance Gas Machine Co., The, Freeport, Ill.  
 Simplicity—Standard-Gillett Light Co., Chicago, Ill.  
 Springfield—Gilbert & Barker Mfg. Co., New York.  
 20th Century—C. M. Kemp Mfg. Co., Baltimore, Md. (light and fuel).  
 Tirrill—Tirrill Gas Machine Lighting Co., New York.  
 U. S. Gas Machine & Pattern Co., Muskegon, Mich.  
 Whitacre—Whitacre, J. E., Mfg. Co., Rockford, Ill.

#### MACHINES, GEAR CUTTING AND MILLING.

American Pneumatic Chuck Co., Chicago, Ill.  
 Betts Machine Co., Inc., Rochester, N. Y.  
 Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
 Bridgeport Machine Tool Works, Rochester, N. Y.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Browning Machine Products Co., Cleveland, O.  
 Cincinnati Gear Cutting Machine Co., The, Cincinnati, O.  
 Cincinnati Grinder Co., Cincinnati, Ohio.  
 Cincinnati Shaper Co., Cincinnati, O.  
 Farwell—The Adams Co., Dubuque, Ia.  
 Fellows Gear Shaper Co., The, Springfield, Vt.  
 Flather Mfg. Co., The, Nashua, N. H.  
 Garvin Machine Co., The, New York, N. Y.  
 Gleason—Gleason Works, The, Rochester, N. Y.  
 High Duty—Gould & Eberhardt, Newark, N. J.  
 Lees-Bradner Co., The, Cleveland, O.  
 M-C—Meisselbach-Catucci Mfg. Co., Newark, N. J.  
 Motch & Merryweather Machine Co., Cleveland, O.  
 Newark Gear Cutting Machine Co., Newark, N. J.  
 Newton—Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 Putnam Machine Co., Fitchburg, Mass.  
 Radial Duplex—Gould & Eberhardt, Newark, N. J.  
 Rochester—Ingle Machine Co., Rochester, N. Y.  
 Sloan & Chace Mfg. Co., Ltd., Newark, N. J.  
 Upton & Gilman Machine Co., Lowell, Mass.  
 Waltham Machine Works, Waltham, Mass.  
 Whiton, D. E., Machine Co., New London, Conn.

#### MACHINES, GEAR HOBBING.

Barber-Colman Co., Rockford, Ill.  
 Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
 Cincinnati Gear Cutting Machine Co., The, Cincinnati, Ohio.  
 Farwell—The Adams Co., Dubuque, Ia.  
 Gleason Works, The, Rochester, N. Y.  
 Gray Machine Tool Co., Inc., Buffalo, N. Y.  
 Hercules—Hercules Machine & Tool Co., Inc., New York, N. Y.



High Duty—Gould & Eberhardt, Newark, N. J.  
Himoff Machine Co., New York, N. Y.  
Lees-Bradner Co., Cleveland, O.  
Meisselbach-Catucci Mfg. Co., Newark, N. J.

#### MACHINES, GEAR TEMPERING.

Gleason Work, The, Rochester, N. Y.

#### MACHINES, GEAR TESTING.

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
Farwell—Adams Co., Dubuque, Ia.  
Gleason Works, The, Rochester, N. Y.  
Morse Twist Drill & Machine Co., New Bedford, Mass.

#### MACHINERY, GLASS WORKS.

Rosedale Foundry & Machine Co., Pittsburgh, Pa.

#### MACHINERY, GLASS AND MARBLE WORKING.

Hisey-Wolf Machine Co., The, Cincinnati, O.  
Kennedy-Van Saun Mfg. & Eng. Co., New York.  
Rosedale Foundry & Machine Co., Pittsburgh, Pa.  
Stephens-Adamson Mfg. Co., Aurora, Ill.

#### MACHINERY, GLUCOSE.

Davenport Machine & Foundry Co., Davenport, Ia.

#### MACHINERY, GLUE AND PASTE MAKING.

(See also "Heaters, Glue.")

Dauber-Bell Machine Co., Oshkosh, Wis.  
Francis Co., Chas. E., Rushville, Ind. (full line).  
Improved Appliance Co., Brooklyn, N. Y.  
New Advance Machinery Co., Van Wert, O.  
Smith, P. J., Machinery Co., Bay City, Mich.  
Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, GLYCERINE.

Houchin-Alken Co., Brooklyn, N. Y.  
Scott, Ernst & Co., Aurora, Ill.

#### MACHINES, GOLD ROLLING.

San Francisco Engineering Co., San Francisco, Cal.

#### MACHINES, GRADUATING.

Davie—Davie Tool Co., The, Cleveland, O.  
LeBlond, R. L., Machine Tool Co., The, Cincinnati, O.  
Modern—Modern Tool Co., Erie, Pa.  
Noble & Westbrook Mfg. Co., Hartford, Conn.  
Oesterlein Machine Co., Cincinnati, O.

#### MACHINES, GRAIN AND SEED CLEANING.

American Marvel—Anglo-American Mill Co., Owensboro, Ky.  
Cedar Rapids Foundry & Machine Co., Inc., Cedar Rapids, Ia.  
Howes, The S., Co., Silver Creek, N. Y.

#### MACHINERY, GRAIN ELEVATOR.

American Machinery & Const. Co., Milwaukee, Wis.  
Barnard & Leas Mfg. Co., Moline, Ill.  
Barnard Mfg. Co., Spokane, Wash.  
Constant Co., B. S., Bloomington, Ill.  
♦ Fairbanks, Morse & Co., Chicago, Ill.  
Great Western Mfg. Co., Leavenworth, Kan.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Munson Mill Machinery Co., Inc., Utica, N. Y.  
♦ Nordyke & Marmon Co., Indianapolis, Ind.  
Richardson Scale Co., Passaic, N. J.  
S-A—Stephens-Adamson Mfg. Co., Aurora, Ill.  
Strong-Scott Mfg. Co., Minneapolis, Minn.  
Union Engineering Co., Cleveland, O.  
Union Iron Works, Decatur, Ill.  
Unique—Robinson Mfg. Co., Muncy, Pa.  
♦ Webster Mfg. Co., Chicago, Ill.  
Weller Mfg. Co., Chicago, Ill.  
Wolf Co., The, Chambersburg, Pa.  
York Foundry & Engine Works, York, Pa.

#### MACHINERY, GRANULATING.

Marine Iron Works, Chicago, Ill.  
Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, GRAVEL WASHING.

Link-Belt Company, Chicago and Philadelphia.  
Puget Sound Machinery Depot, Seattle, Wash.  
Smith Engineering Works, Milwaukee, Wis.  
Stocker—Stocker Material Washer Co., Highland, Ill.  
Teismith—T. L. Smith Co., Milwaukee, Wis.

#### MACHINES, GREASE, FOR LUBRICATING PNEUMATIC TOOLS.

Little Giant—Chicago Pneumatic Tool Co., New York, N. Y.

#### MACHINES, GRINDING.

(See "Grinders.")

#### MACHINES, GRINDING, CENTER.

Chandler & Taylor Co., Indianapolis, Ind.

#### MACHINES, GRINDING, PORTABLE.

♦ "D" Machine—Gem Mfg. Co., Pittsburgh, Pa.  
General Grinding Wheel Corp., Philadelphia, Pa.

#### MACHINES, GRINDING, TOOL.

(See "Grinders, Tool.")

#### MACHINES, GROOVING, METAL.

Fischer—Fischer Machine Works, Philadelphia, Pa.

#### MACHINERY, GUN BARREL.

Diamond Machine Co., Providence, R. I.  
Pratt & Whitney Co., Hartford, Conn.

#### MACHINERY, GUN STOCK.

Defiance Machine Works, The, Defiance, O.

#### MACHINERY, GYPSUM.

Bartlett & Snow Co., The C. O., Cleveland, O.  
Cummer, F. D., & Son Co., Cleveland, O.  
Sprout, Waldron, & Co., Muncy, Pa.  
Stroud, E. H., & Co., Chicago, Ill.

#### MACHINES, HACK SAW.

(See Saws, Hack, Machines.)

#### MACHINES, HAMMERING.

Langeller Mfg. Co., Cranston, R. I.

#### MACHINERY, HANDLE.

(See "Lathes, Wood Turning.")

Goodspeed Machine Co., Winchendon, Mass.  
Noble Machine Co., Ft. Wayne, Ind.  
Trevor Mfg. Co., Lockport, N. Y.

#### MACHINERY, HINGE.

Baird Machine Co., The, Bridgeport, Conn.  
Manville, E. J., Machine Co., Waterbury, Conn.  
Waterbury Farrell & Foundry Machine Co., The, Waterbury, Conn.

#### MACHINERY, HOE GRINDING.

B. C. Co.—Barber-Colman Company, Rockford, Ill.  
Harris—Harris Engineering Co., Bridgeport, Conn.  
Newark Gear Cutting Machine Co., Newark, N. J.

#### MACHINERY, HOOF.

Defiance Machine Works, The, Defiance, O.

#### MACHINES, ROSE TESTING.

Buckley-Larkin Mfg. Co., Dayton, O.

#### MACHINES, HUB BANDING.

Lourie Mfg. Co., Springfield, Ill.

#### MACHINERY, HUB AND SPOKE.

Defiance Machine Works, Defiance, O.

#### MACHINES, ICE CREAM FREEZING.

Boston—Whitney, F. E., Co., Boston, Mass. (electric).  
Champion—The Allman Gas Engine & Machine Co., New York.  
Montague Iron Works Corp., Chicago, Ill.

#### MACHINERY, ICE HANDLING.

Alvey-Ferguson Co., Cincinnati, O.  
Caldwell, H. W., & Son Co., Chicago, Ill.  
Cleveland Crane & Engineering Co., Wickliffe, O.  
Gifford-Wood Co., Hudson, N. Y.  
Gruman—Gruman Ice Tool Works, Branchville, Conn.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
Schultz & Son, A. L., Chicago, Ill.

#### MACHINES, INK GRINDING.

Black-Clawson Co., Hamilton, O.

#### MACHINERY, INSULATOR FIN.

Asheville Supply & Foundry Co., Asheville, N. C.  
Chattanooga Machinery Co., Chattanooga, Tenn. (wood).  
Defiance Machine Works, The, Defiance, O.  
Royle, John, & Sons, Paterson, N. J.

#### MACHINERY, IRONING (LAUNDRY).

(See also "Machinery, Laundry.")

Chicago Excel—Chicago Dryer Co., Chicago, Ill.  
Chicago Simplex—Chicago Dryer Co., Chicago, Ill.

Chicago 3-Roll—Chicago Dryer Co., Chicago, Ill.  
Mann Corporation (domestic), Kankakee, Ill.  
Western Electric Co., Inc., Chicago, Ill.

#### **MACHINERY, IRRIGATING PIPE.**

Canton Foundry & Machine Co., Canton, O.

#### **MACHINES, JARRING, FOUNDRY.**

Herman Pneumatic Machine Co., Pittsburgh, Pa.

#### **MACHINES, JOURNAL MOULDING, BRASS.**

Victory—Monarch Engineering & Mfg. Co., Baltimore, Md.

#### **MACHINERY, KEY FILING.**

Harrison—Harrison & Co., New York.

#### **MACHINES, KEY SEATING & GROOVING.**

Bilton Machine Tool Co., The, Bridgeport, Conn.  
Bucher-Smith—Bucher-Smith Co., The, East Liverpool, O.

Burr—John T. Burr & Son, Brooklyn, N. Y.  
Catlin—Chattanooga Machinery Co., Chattanooga, Tenn.

Davis Machine Tool Co., Inc., Rochester, N. Y.  
Giant Keyseater—Mitts & Merrill, Saginaw, Mich.  
It's a Baker—Baker Bros., Toledo, O.  
Lapointe, J. N., Co., New London, Conn.  
Lapointe Machine Tool Co., Hudson, Mass.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Morton—Morton Mfg. Co., Muskegon Heights, Mich.  
National-National Machine Tool Co., Cincinnati, O.  
Newton Machine Tool Works, Inc., Philadelphia, Pa.  
Niles-Bement-Fond Co., New York, N. Y.  
Noviwork—Novelty Iron Works Co., Dyersville, Ia.  
Stephens-Adamson Mfg. Co., Aurora, Ill.  
Taylor & Fenn Co., Hartford, Conn.  
Whitney Mfg. Co., Hartford, Conn. (Woodruff system).

#### **MACHINES, KEY TURNING.**

Warner & Swasey Co., Cleveland, O.

#### **MACHINERY, LAUNDRY.**

American Tool & Machine Co., Boston, Mass.  
American Ironing Machine Co., Chicago, Ill.  
American Laundry Machinery Co., Cincinnati, O.  
Chicago—Chicago Dryer Co., Chicago, Ill.  
Chicago Laundry Machinery Co., Chicago, Ill.  
Fritz, Geo. J., Foundry & Machine Co., St. Louis, Mo.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Lexington—Lexington Machine Co., Lexington, Ky.  
National Laundry Machinery Co., Dayton, O.  
Oil & Waste Saving Machine Co., Philadelphia.  
Paragon Mfg. Co., Chicago, Ill.  
Triumph Laundry Machine Co., Hamilton, O.  
Troy Laundry Machinery Co., Chicago, Ill.  
United—United Engine Co., Lansing, Mich.  
Windsor Locks Machine Co., Windsor Locks, Conn.

#### **MACHINERY, LEAD PIPE.**

Farrell Fdy. & Machine Co., Ansonia, Conn.

#### **MACHINERY, LEATHER BELTING.**

Advance—Advance Leather Machinery Co., Boston, Mass.  
Turner Tanning Machine Co., Peabody, Mass.

#### **MACHINERY, LEATHER STRETCHING.**

Horsting Leather Stretcher Co., Chicago, Ill.

#### **MACHINERY, LEATHER WORKING.**

American Belting & Tanning Co., Boston, Mass.  
American Tool & Machine Co., Boston, Mass.  
Randall, J. D. Co., The, Cincinnati, O.  
Slocumb, F. F., & Co., Wilmington, Del.  
Turner Tanning Machine Co., Peabody, Mass.

#### **MACHINERY, LINOLEUM MAKING.**

Farrel Foundry & Machine Co., Ansonia, Conn.

#### **MACHINERY, LOGGING.**

(See also "Engines, Hoisting," etc.)

Clyde Universal—Clyde Iron Works, Duluth, Minn.  
Flory Mfg. Co., The, Bangor, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
McGiffert—Clyde Iron Works, Duluth, Minn.  
Mundy, J. S., Hoisting Engine Co., Newark, N. J.  
Rapid—Clyde Iron Works, Duluth, Minn.  
Street Brothers Machine Works, Chattanooga, Tenn.  
Washington Iron Works, Seattle, Wash.

#### **MACHINERY, LUMBER STACKING AND SORTING.**

Bradney Machine Co., Inc., Middletown, N. Y.  
Filer & Stowell Co., The, Milwaukee, Wis.  
Link-Belt Company, Chicago and Philadelphia.

#### **MACHINERY, MARINE AND CARGO.**

Melco—Maine Electric Co., Portland, Ore.  
Worthington Pump & Machinery Corp., New York, N. Y.

#### **MACHINES FOR MARKING TRADE NAMES, ETC., ON SOLID METAL.**

Electro—Stylograph Co., The, New York, N. Y.  
Martin—Martin Machine Co., Greenfield, Mass.  
Noble & Westbrook Mfg. Co., Hartford, Conn.  
Peerless—The Hero Mfg. Co., Philadelphia, Pa.

#### **MACHINERY, MARBLE MILL.**

Badger—Wisconsin Foundry & Machine Co., Madison, Wis. (Polishers.)  
Knoxville—Ty-Sa-Man Machine Co., Knoxville, Tenn. (saws, polishers, rubbers).  
Oliver, Wm. J., Mfg. Co., Knoxville, Tenn.

#### **MACHINES, MEASURING, LINEAL.**

Pratt & Whitney Co., Hartford, Conn.  
Schleuter—M. L. Schleuter, Chicago, Ill.  
Tally Meter—Tally Meter Co., Norwich, Conn.

#### **MACHINES, METAL EMBOSSEING.**

Keller Mechanical Engraving Co., Brooklyn, N. Y.  
Lents Art Die & Machine Co., Indianapolis, Ind.  
Martin—Martin Machine Co., Greenfield, Mass.  
Oliver—The Oliver Machinery Co., Grand Rapids, Mich.  
Torrey Roller Bushing Works, Bath, Me.

#### **MACHINES, METAL ENGRAVING.**

Geo. Gorton Machine Co., Racine, Wis.

#### **MACHINERY, METAL FURNITURE.**

Bliss—E. W. Bliss & Co., Brooklyn, N. Y.

#### **MACHINES FOR TESTING HARDNESS OF METAL.**

Brinell—Scientific Materials Co., Pittsburgh, Pa.

#### **MACHINES, METAL SAWING.**

(See also "Saws, Hack, Power.")

Ajax Mfg. Co., Cleveland, O.  
Burr—John T. Burr & Son, Brooklyn, N. Y.  
Espan-Lucas Machine Works, Philadelphia, Pa.  
Eureka—The Henry G. Thompson & Son Co., New Haven, Conn. (fig).  
Horizontal Junior & Horizontal Napier—Metal Saw & Machine Co., Inc., Springfield, Mass.  
Higley—Higley Machine Co., Croton Falls, N. Y.  
Lea-Simplex—Lea Equipment Co., Philadelphia, Pa.  
Springfield, Mass.  
Newton Machine Tool Works, Inc., Philadelphia, Pa.  
Peerless Machine Co., Racine, Wis.  
United Engineering & Foundry Co., St. Paul, Minn.

#### **MACHINES, METAL SLITTING.**

Atlas Machine Co., The, Waterbury, Conn.  
Blake & Johnson Co., The, Waterbury, Conn.  
Bliss, E. W., & Co., Brooklyn, N. Y.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

#### **MACHINERY, METAL WHEEL.**

Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.

#### **MACHINERY, MILK CONDENSING.**

Baizley Iron Works, The, John, Philadelphia, Pa.  
Berlin—Schaefer Mfg. Co., Berlin, Wis.  
Harris, Arthur Co., Chicago, Ill.

#### **MACHINES, MILKING.**

United Engine Co., Lansing, Mich.

#### **MACHINES, MILLING.**

(See also "Attachments, Milling.")

Adams Co., Dubuque, Iowa.  
American—American Milling Machine Co., Cincinnati, Ohio.  
American Tool & Machine Co., Boston, Mass. (valve).  
American Watch Tool Co., Waltham, Mass.  
Beaman & Smith Co., The, Providence, R. I.  
Becker Milling Machine Co., Hyde Park, Mass.  
Betts Machine Co., Inc., Rochester, N. Y. (Car wheel tire).  
Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
Bliss, E. C., Mfg. Co., Providence, R. I. (inverted die).  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Burke's—Burke Machine Tool Co., Conneaut, O.  
Carroll Foundry & Machine Tool Co., Bucyrus, O.  
Carter & Hakes Machine Co., The, Winsted, Conn.  
Cincinnati—Cincinnati Automatic Machine Co., Cincinnati, O.

Cincinnati Milling Machine Co., Cincinnati, Ohio (automatic, duplex, plain, universal and vertical).  
 Cleveland—Cleveland Machine Tool Co., Cleveland, O.  
 Clough's—R. M. Clough, Meriden, Conn.  
 Cochran Bly Co., Rochester, N. Y. (universal and vertical).  
 Conradson—Conradson Machine Tool Co., Green Bay, Wis.  
 Davenport Mfg. Co., Meadville, Pa.  
 Davis—Davis & Thompson Co., Milwaukee, Wis.  
 Detrick & Harvey Machine Co., Baltimore, Md.  
 Espen-Lucas Machine Works, Philadelphia, Pa.  
 Farrell Fdy. & Mach. Co., Ansonia, Conn.  
 Farwell—The Adams Co., Dubuque, Ia.  
 Garvin Machine Co., The, New York, N. Y. (Automatic, Camorform, Duplex, Hana, Plain, Universal Vertical, Vertical Spindle.)  
 Gooley & Edlund, Syracuse, N. Y.  
 Grayson—Grayson Tool & Mfg. Co., Charleston, W. Va.  
 Greenfield Machine Co., The, Greenfield, Mass.  
 Hendey—The Hendey Machine Co., Torrington, Conn.  
 Herbert, Alfred, Ltd., New York City.  
 Ingersoll Milling Machine Co., The, Rockford, Ill.  
 Jackson—Jackson Machine Tool Co., Jackson, Mich.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Kearney & Trecker Corp., Milwaukee, Wis.  
 Kemp Smith—Kemp Smith Mfg. Co., Milwaukee, Wis.  
 Knight—W. B. Knight Machinery Co., St. Louis, Mo.  
 Le Blond—The R. K. Le Blond Machine Tool Co., Cincinnati, Ohio.  
 Lincoln—Garvin Machine Co., The, New York, N. Y.  
 Lucas Machine Tool Co., Cleveland, O.  
 McCabe, J. J., Lathe & Mach. Corp., New York, N. Y.  
 Maxi-Mills—Bullard Machine Tool Co., Bridgeport, Conn.  
 Mechenburg Iron Works, Charlotte, N. C.  
 Milwaukee—Kearney & Trecker Co., Milwaukee, Wis.  
 Morris—The John B. Morris Machine Tool Co., Cincinnati, O. (Bench Type.)  
 Morton Mfg. Co., Muskegon Heights, Mich.  
 Newton—Newton Machine Tool Works, Inc., Philadelphia, Pa.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Ohio—The Oesterlein Machine Co., Cincinnati, O.  
 Oliver—The Oliver Machinery Co., Grand Rapids, Mich.  
 Pedrick—Pedrick Tool & Machine Co., Philadelphia. (Portable.)  
 Port Huron Engine & Thresher Co., Port Huron, Mich.  
 Potter & Johnston Machine Co., Pawtucket, R. I.  
 Pratt & Whitney Co., Hartford, Conn.  
 Precision—Lucas Machine Tool Co., Cleveland, O. (combined horizontal and vertical).  
 Prescott Co., The, Menominee, Mich.  
 Richardson Scale Co., Passaic, N. J.  
 Rockford Milling Machine Co., Rockford, Ill.  
 Rockford—Rockford Machine Tool Co., Rockford, Ill.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Shields Cutter Co., Cleveland, O.  
 Steptoe—John Steptoe Co., Cincinnati, O.  
 Superior Machine & Engineering Co., Detroit, Mich.  
 Traylor Engineering & Mfg. Co., Allentown, Pa.  
 Taylor & Fenn Co., Hartford, Conn. (vertical).  
 Underwood, H. B., Corp., Philadelphia, Pa.  
 Universal Boring Machine Co., Hudson, Mass.  
 Universal—The Garvin Machine Co., New York, N. Y.  
 U S—United States Machine Tool Co., Cincinnati, O.  
 Union Engineering Co., Cleveland, O.  
 Valley City Machine Works, Grand Rapids, Mich.  
 Van Norman Machine Tool Co., Springfield, Mass.  
 Warner & Swasey Co., Cleveland, O.  
 Whitcomb, Geo. D., Co., Rochelle, Ill. (Coal.)  
 Whitney Mfg. Co., Hartford, Conn.

**MACHINES, MILLING, BENCH.**

Carter & Hakes Machine Co., The, Winsted, Conn.  
 Farwell-Adams Co., Dubuque, Ia.  
 Manville, E. J., Machine Co., Waterbury, Conn.  
 Niles-Bement-Pond Co., New York.  
 Pedrick—Pedrick Tool & Machine Co., Philadelphia.  
 Pratt & Whitney Co., Hartford, Conn.  
 Rockford Milling Machine Co., Rockford, Ill.  
 Sloan & Chace Mfg. Co., Ltd., Newark, N. J.  
 Stark Tool Co., Waltham, Mass.  
 Van Norman Machine Tool Co., Springfield, Mass.  
 Whitney Mfg. Co., Hartford, Conn.  
 Wisconsin—Wisconsin Miller Mfg. Co., Milwaukee, Wis. (hand).

**MACHINES, MILLING, LINCOLN.**

Becker Milling Machine Co., Hyde Park, Mass.  
 Carter & Hakes Machine Co., Winsted, Conn.  
 Garver Machine Co., New York N. Y.  
 Hendey Machine Co., Torrington, Conn.  
 Kemp Smith Mfg. Co., West Allis, Wis.  
 Pratt & Whitney Co., Hartford, Conn.

**MACHINERY, MINING.**

(See also "Cars, Machy." "Case Handling." "Machy. Coal Washing." "Drills, Screens, etc.")

Albany Iron Works, Albany, Ore.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 American Concentrator Co., Springfield, O.

Atlas M. & M. Co., Lincoln, N. J.  
 Bartlett & Snow Co., The, C. O., Cleveland, O.  
 Bailey-Burrus Mfg. Co., Atlanta, Ga.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Bonnot Co., The, Canton, O.  
 Bretting Mfg. Co., C. G., Ashland, Wis.  
 Browning Engineering Co., Cleveland, O.  
 Chalmers & Williams, Chicago, Ill.  
 Colorado Iron Works Co., Denver, Colo.  
 Connellsville Blower Co., Connellsville, Ind.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Cochise—Cochise Machine Co., Los Angeles, Calif.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va. (coal.)  
 Farrell Foundry & Machine Co., Ansonia, Conn.  
 General Electric Co., Schenectady, N. Y. (electric).  
 Goodman—Goodman Mfg. Co., Chicago, Ill.  
 Grant Iron Works, Mahanoy City, Pa.  
 Ingersoll-Rand Co., New York, N. Y.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Joshua Hendy Iron Works, San Francisco, Cal.  
 Judson Mfg. Co., San Francisco, Cal.  
 Kemp Smith—Kemp Smith Mfg. Co., Milwaukee, Wis.  
 Kennedy—Van Saun Mfg. & Eng. Co., New York, N. Y.  
 Lake Erie Engineering Works, Buffalo, N. Y.  
 Lake Shore Engine Works, Marquette, Mich.  
 Lane Mill & Machinery Co., Los Angeles, Cal.  
 Lehigh Car Wheel & Axle Works, Catasqua, Pa.  
 Leyner, J. Geo., Engineering Works Co., Littleton, Colo.  
 Link-Belt Company, Chicago and Philadelphia.  
 McMyler Interstate Co., Cleveland, O.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Mine & Smelter Supply Co., The, Salt Lake City, Utah.  
 Mining Safety Device Co., The, Bowerston, O.  
 Minneapolis Steel & Machinery Co., Minneapolis, Minn.  
 Moore Filter Co., The, New York, N. Y.  
 Morgan-Electric Gardner Co., Chicago, Ill.  
 Morris Co., I. P., Philadelphia, Pa.  
 Morrow Mfg. Co., The, Wellston, O.  
 Moussette Co., Inc., O. J., New York, N. Y.  
 Mining Safety Device Co., The, Bowerston, O. (Automatic cagers, feeders, and stops for cages and rotary dumps.)  
 Mundy, J. S., Hoisting Engine Co., Newark, N. J.  
 Oliver, Wm. J., Mfg. Co., Knoxville, Tenn.  
 P. H. & F. M. Roots Co., Connellsville, Ind.  
 Power & Mining Machinery Co., Milwaukee, Wis.  
 Prescott Steam Pump Works, Milwaukee, Wis.  
 Pulaski Foundry & Mfg. Corp., Pulaski, Va.  
 Savage, W. J., Co., Knoxville, Tenn.  
 South Side Foundry & Machine Wks., Charleston, W. Va.  
 Stears-Rodger Mfg. Co., Denver, Colo.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Stine, The J. C., Co., Tyrone, Pa.  
 Stine, S. E., Osceola Mill, Pa.  
 Stroud, E. H., & Co., Chicago, Ill.  
 Sturtevant Mill Co., Boston, Mass.  
 Sullivan Machinery Co., Chicago, Ill.  
 Traylor Engineering & Mfg. Co., Allentown, Pa.  
 Union Engineering Co., Cleveland, O.  
 Union Foundry & Machine Co., Pittsburgh, Pa.  
 United Iron Works Co., Springfield, Mo.  
 United Iron Works, Oakland, Cal.  
 United—United Iron Works, Kansas City, Mo.  
 Vaican Steam Shovel Co., Toledo, O.  
 Webb City & Carterville Foundry & Machine Works, Webb City, Mo.  
 ♦ Webster Mfg. Co., The, Chicago, Ill.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Willmot Engineering Co., Hazleton, Pa.  
 Wisconsin Foundry & Machine Co., Madison, Wis.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**MACHINERY, MIXING & SIFTING.**

Abbe Engineering Co., New York, N. Y.  
 Houchin-Aiken Co., Brooklyn, N. Y.  
 Sturtevant Mill Co., Boston, Mass.  
 Union Engineering Co., The, Cleveland, O.

**MACHINES, MOLDING.**

American Molding Machine Co., Terre Haute, Ind.  
 American—American Foundry Equipment Co., New York, N. Y.  
 Arcade Mfg. Co., Freeport, Ill.  
 Baird—Baird Machine & Mfg. Co., Detroit, Mich.  
 Berkshire—The Berkshire Mfg. Co., Cleveland, O.  
 Buch Foundry Equipment Co., York, Pa.  
 Champion Foundry & Machine Co., The, Chicago, Ill.  
 Davenport Machine & Foundry Co., Davenport, Ia.  
 Farwell—The Adams Co., Dubuque, Ia.  
 Federal Foundry Sup. Co., Cleveland, O.  
 Federal Malleable Co., West Allis, Wis.  
 Grimes Molding Machine Co., Detroit, Mich.  
 Herman—Herman Pneumatic Machine Co., Pittsburgh, Pa.  
 Keller Mechanical Engraving Co., Brooklyn, N. Y.  
 Mumford—Dayton Molding Machine Co., Dayton, O.  
 Mumford—Hanna Engineering Wks., Chicago, Ill.  
 Nicholls, Wm. H., Co., Inc., Brooklyn, N. Y.  
 Osborn—The Osborn Mfg. Co., Cleveland, O.

Pridmore, Henry E., Chicago, Ill.  
 Rathbone—Hanna Engineering Works, Chicago, Ill.  
 Tabor—Tabor Mfg. Co., Philadelphia, Pa.  
 Taylor-Wilson Mfg. Co., Philadelphia, Pa.  
 Teetor, R. J., Co., Muskegon, Mich.  
 U. S. Molding Machine Co., The, Cleveland, O.  
 Webb, J. F., Mfg. & Supply Co., Davenport, Ia.

#### MACHINES, MOORING.

Chase Machine Co., The, Cleveland, O. (steam).

#### MACHINES, MORTISING.

(See also "Machinery, Woodworking.")

Bentel & Margendant, Hamilton, O.  
 Black Bros. Co., The, Mendota, Ill.  
 Enterprise Pulley Mortiser—Austin & Eddy, Boston, Mass.  
 Greenlee—Greenlee Bros. Co., Rockford, Ill.  
 J. A. Fay & Egan Co., Cincinnati, O.  
 Jenkins Machine Co., Sheboygan, Wis.  
 New Britain Machine Co., New Britain, Conn.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Smith—H. B. Smith Machine Co., Smithville, N. J.  
 Two Minute—A. W. Miller Mfg. Co., Cincinnati, O.  
 Whitney—Baxter D. Whitney & Son, Inc., Winchendon, Mass. (hollow chisel).

#### MACHINERY, NAIL MILL.

Glader, Wm., Machine Works, Chicago, Ill.  
 National Machinery Co., Tiffin, O.  
 Perkins, H. K., Co., Taunton, Mass.  
 Turner, Vaughn & Taylor Co., The, Cuyahoga Falls, O.  
 Universal—Sleeper & Hartley, Inc., Worcester, Mass.  
 Walton & McKee, Kokomo, Ind.

#### MACHINES, NIBBLING.

"Oliver of Adrian" Oliver Instrument Co., Adrian, Mich.

#### MACHINES, NIPPLE THREADING.

Apex—Merrell Mfg. Co., Toledo, O.  
 Armstrong Mfg. Co., Bridgeport, Conn.  
 Landis Machine Co., Waynesboro, Pa.  
 Loew Mfg. Co., Cleveland, O.  
 ♦ Murchey—Murchey Machine & Tool Co., Detroit, Mich.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Oster Mfg. Co., Cleveland, O.  
 Saunders, D., Sons, Yonkers, N. Y.  
 Standard Engineering Co., Ellwood City, Pa.  
 Trundle—General Metals Co., Detroit, Mich.

#### MACHINES, NUMBER STAMPING, ON METAL, LEATHER, ETC.

American—American Numbering Machine Co., Brooklyn, N. Y.  
 Matthews & Co., Jas. H., Pittsburg, Pa.

#### MACHINES, NUT FACING.

Garvin Machine Co., The, New York, N. Y.  
 Kent Machine Co., Kent, O.  
 National Machinery Co., Tiffin, O.  
 Waterbury Farrell & Foundry Machine Co., The, Waterbury, Conn.

#### MACHINES, NUT TAPPING.

Namco—National-Acme Mfg. Co., Cleveland, O.  
 National Machinery Co., Tiffin, O.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Reed Co., Francis, Worcester, Mass.  
 Webster & Perks Tool Co., Springfield, O.

#### MACHINERY, OIL MILL.

Buckeye Iron & Brass Co., Dayton, O.  
 Callahan Co., The W. P., Dayton, O.  
 Cardwell Machine Co., Richmond, Va.  
 Link-Belt Company, Chicago and Philadelphia.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Smith-Valle—The Platt Iron Wks. Co., Dayton, O.  
 Stroud, E. H., & Co., Chicago, Ill.  
 ♦ Webster Mfg. Co., Chicago, Ill.

#### MACHINERY, OIL REFINERY.

Vogt Machine Co., Henry, Louisville, Ky.

#### MACHINES, OIL AND WASTE SEPARATING.

American Machinery & Mfg. Co., Charlotte, N. C.  
 American Tool & Machine Co., Boston, Mass.  
 D'Olier Centrifugal Pump & Machine Co., Philadelphia, Pa.  
 Oil & Waste Saving Machine Co., Philadelphia, Pa.

#### MACHINERY, OIL WELL PULLING AND CLEANING OUT.

Buckeye Traction Ditcher Co., Findlay, O.  
 Bessemer—Bessemer Gas Engine Co., Grove City, Pa.  
 Henderson, W. K., Iron Works & Supply Co., The, Shreveport, La.

#### MACHINERY, PACKAGE WRAPPING AND TYING.

Barnard & Leas Mfg. Co., Moline, Ill.  
 McChesney, J. S., & Co., Chicago, Ill.  
 Miller, Charles E., Anderson, Ind.

#### MACHINES, PAIL.

Goodspeed Machine Co., Winchendon, Mass.  
 Sleeper & Hartley, Inc., Worcester, Mass.  
 Trevor Mfg. Co., Lockport, N. Y.

#### MACHINERY, PAINT MAKING.

Bartlett & Snow Co., The C. O., Cleveland, O.  
 Gaston's, The N. B., Sons' Co., Beloit, Wis. (grinding mills).  
 Stroud, E. H., & Co., Chicago, Ill.  
 Union Engineering Co., Cleveland, O.

#### MACHINES AND EQUIPMENT, PAINTING AND WHITEWASHING.

Bartlett & Snow Co., The C. O., Cleveland, O.  
 Binks Spray Equipment Co., Chicago, Ill.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 De Vilbiss Spray Painting System—The De Vilbiss Mfg. Co., Toledo, Ohio.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hardie Mfg. Co., The, Hudson, Mich.  
 Hurst—H. L. Hurst Mfg. Co., Greenwich, O.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Macleod Co., The, Cincinnati, O.  
 Myers & Bro., F. E., Ashland, O.  
 Niagara—Geo. M. Stowe, Jr., Buffalo, N. Y.  
 Ohl—Geo. A. Ohl & Co., Newark, N. J.  
 Paragon—The Campbell-Hausfeld Co., Harrison, O.  
 Saranac Machine Co., Benton Harbor, Mich.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Vaporspray—Vapor-Valve Co., St. Louis, Mo.

#### MACHINERY, PAPER BAG.

Smith & Winchester Mfg. Co., South Windham, Conn.

#### MACHINERY, PAPER AND FIBRE BOX.

Beck, Chas. Co., Philadelphia, Pa.  
 Brightwood, Codrington—National Packaging Machinery Co., Boston, Mass.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Hobbs Mfg. Co., Worcester, Mass.  
 Keene, Geo. C., & Co., Cincinnati, O.  
 Knowlton Co., M. D., Rochester, N. Y.  
 Parry, Samuel R., Rochester, N. Y.  
 Pneumatic Scale Corp., Ltd., Norfolk Downs, Mass.  
 Union Engineering Co., The, Cleveland, O.

#### MACHINERY, PAPER AND PULP MILL.

Bagley & Sewell Co., Watertown, N. Y.  
 Baker Mfg. Corp., Saratoga Springs, N. Y.  
 Biggs Boiler Works Co., East Akron, O.  
 Black-Clawson Co., Hamilton, O.  
 Briggs Boiler Works Co., Hamilton, O.  
 Clark-Aiken Co., The, Lee, Mass.  
 Dayton-Globe Iron Works Co., The, Dayton, O.  
 Farnham Mfg. Co., Buffalo, N. Y.  
 Farrell Foundry & Mach. Co., Ansonia, Conn.  
 Fulton Machine & Vise Co., Lowville, N. Y.  
 Holyoke Machine Co., Holyoke, Mass.  
 Hudson—Sharp Machine Co., Green Bay, Wis.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 M. & M.—Mitts & Merrill, Saginaw, Mich.  
 Millsbaugh—Sandusky Fdy. & Machine Co., The, Sandusky, O.  
 Mills Machine Co., Lawrence, Mass.  
 ♦ Moore & White Co., The, Philadelphia, Pa.  
 Murray, D. J., Mfg. Co., Wausau, Wis.  
 Norwood Engineering Co., Florence, Mass.  
 Portland Co., The, Portland, Me.  
 Rice, Barton & Fales Machine & Iron Co., Worcester, Mass.  
 Ryther & Pringle Co., Carthage, N. Y.  
 Sandy Hill Iron & Brass Works, The, Hudson Falls, N. Y.  
 Smith & Winchester Mfg. Co., South Windham, Conn.

#### MACHINES, PAPER MACERATING.

Blomfeldt & Rapp Co., Chicago, Ill.

#### MACHINERY, PASTEURIZING.

Badger—The Vilter Mfg. Co., Milwaukee, Wis.  
 Enamelled Pipe & Enameling Co., Elyria, O.  
 Loew Mfg. Co., Cleveland, O.  
 Meyer, Geo. J., Mfg. Co., Milwaukee, Wis.  
 Standard Regulator Co., New York, N. Y.

#### MACHINES, PASTING AND COMBINING.

Black-Clawson Co., Hamilton, O.

#### MACHINERY, PATTERN DRAWING.

Mumford—Hanna Engineering Works, Chicago, Ill.

**MACHINERY, PATTERN MAKING.**

(See also "Machinery, Woodworking.")

Bagley & Sewall Co., Watertown, N. Y.  
 Bentel & Margendant, Hamilton, O.  
 Crescent Machine Co., Leetonia, O.  
 Fox Machine Co., Grand Rapids, Mich.  
 Herman Pneumatic Machine Co., Pittsburg, Pa.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Perkins, H. K., Co., Taunton, Mass.  
 Porter Mch. Co., C. O., Grand Rapids, Mich.

**MACHINES, PATTERN, SPLIT.**

Mumford—Hanna Engineering Works, Chicago, Ill.

**MACHINERY, PAVING BLOCK.**

Garland Co., The M., Bay City, Mich.  
 Wheland Co., The, Chattanooga, Tenn.

**MACHINERY, PEANUT HARVESTING.**

Cardwell Machine Co., Richmond, Va.

**MACHINES, PERFORATING.**

Keller Mechanical Engraving Co., Brooklyn, N. Y.  
 Matthews & Co., Jas. H., Pittsburg, Pa.  
 Rock River Machine Co., Jamesville, Mass.

**MACHINERY, PHOSPHATE MILL.**

Atlas Machine Co., Nashville, Tenn.  
 Bailey-Lebby Co., Charleston, S. C.  
 Georgia Iron Works, Augusta, Ga.  
 Kehoe Iron Works, Savannah, Ga.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Poole Eng. & Mach. Co., Baltimore, Md.  
 Schofield, J. S., Sons Co., Macon, Ga. (dryers).  
 Stroud, E. H., & Co., Chicago, Ill.

**MACHINES, PICKLING, SHEET METAL.**

Mesta Machine Co., The, Pittsburg, Pa.

**MACHINERY, PICTURE FRAMING.**

Rockford Mitre Box Co., Rockford, Ill.  
 Springfield—Shawver Co., Springfield, O.

**MACHINERY, PIN.**

Baird Machine Co., Bridgeport, Conn.

**MACHINES, PINION CUTTING.**

Sloan & Chance Mfg. Co., Ltd., Newark, N. J.

**MACHINERY, PIPE BENDING.**

Buffalo Forge Co., Buffalo, N. Y.  
 Cox, J. Fillmore, Bayonne, N. J.  
 Galland-Henning Mfg. Co., Milwaukee, Wis.  
 Hydraulic Press Mfg. Co., The, Mt. Gilead, O.  
 Pedrick & Smith—Chester Eng. & Machine Co., Chester, Pa.  
 Pedrick Tool & Machine Co., Philadelphia.  
 Riverside Machine Co., Chester, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Stoevers—Treadwell Engineering Co., Easton, Pa.  
 Underwood, H. B., Corp., Philadelphia, Pa.  
 Wonder—American Pipe Bending Machine Co., Boston, Mass.

**MACHINES, PIPE AND TUBE CUTTING.**

Cox & Sons Co., The, Bridgeton, N. J.  
 Fox Machine Co., Inc., Jackson, Mich.  
 French Patent—A. P. Smith Mfg. Co., Newark, N. J.  
 Garvin Machine Co., The, New York, N. Y.  
 Giant Power—San Francisco Engineering Co., San Francisco, Cal.  
 Grant—The Lees-Bradner Co., Cleveland, O.  
 Jarecki—Jarecki Mfg. Co., Erie, Pa.  
 Murchey Machine & Tool Co., Detroit, Mich.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Standard Engineering Co., Ellwood City, Pa.

**MACHINES, PIPE CUTTING AND THREADING.**

Apex Merrill—The Merrill Mfg. Co., Toledo, O.  
 Armstrong Mfg. Co., The, Bridgeport, Conn. (hand and power).  
 B. & K.—Bignall & Keeler Machine Works, Edwardsville, Ill.  
 Beaver, Easy-Worker—The Borden Co., Warren, O.  
 Bulldog—Oster Mfg. Co., The, Cleveland, O.  
 Cox & Sons Co., Bridgeton, N. J.  
 Duplex—Bignall & Keeler Machine Works, Edwardsville, Ill.  
 Forbes—Curtis & Curtis Co., The, Bridgeport, Conn.  
 Fox Machine Co., Inc., Jackson, Mich.  
 Giant Powder—San Francisco Eng. Co., San Francisco, Cal.  
 G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hoefler—Hoefler Mfg. Co., Freeport, Ill.

Jarecki Mfg. Co., Erie, Pa.  
 Landis Machine Co., Waynesboro, Pa.  
 Lathecut—Diamond Machine Co., Cincinnati, O.  
 Lathecut—Wm. T. Johnson Co., Cincinnati, O.  
 Merrell—The Merrell Mfg. Co., Toledo, O.  
 Mill-Type Standard—Standard Engineering Co., Ellwood City, Pa.

❖ Murchey Machine & Tool Co., Detroit, Mich.  
 ❖ National Acme Mfg. Co., Cleveland, O.  
 Niles-Bement-Pond Co., New York, N. Y.  
 P. D. Q. C.—Bignall & Keeler Mfg. Co., Edwardsville, Ill.  
 Peerless—Bignall & Keeler Machine Works, Edwardsville, Ill.  
 Pipe Machinery Co., The, Cleveland, O.  
 Robinson Improved—Wm. V. Robinson Co., Owosso, Mich.  
 Sandusky—Modern Machinery Co., Wilmington, Del.  
 Saunders—D. Saunders' Sons, Inc., Yonkers, N. Y.  
 Stoevers—Treadwell Engineering Co., New York, N. Y.  
 Taylor-Wilson Mfg. Co., The, McKees Rocks, Pa.  
 ❖ Toledo—Toledo Pipe Threading Machine Co., Toledo, O. (hand).  
 ❖ Walworth Mfg. Co., Boston, Mass.  
 Water Works Equipment Co., New York.  
 W. B.—San Francisco Engineering Co., San Francisco.  
 Wieland Standard—Standard Engineering Co., Ellwood City, Pa.  
 Williams—Williams Tool Corp., Erie, Pa.

**MACHINES, PIPE JOINT MELTING.**

Turner Brass Works, The, Sycamore, Ill.

**MACHINERY, PIPE MILL.**

Bignall & Keeler Mfg. Co., Edwardsville, Ill.  
 National Machinery Co., Tiffin, O.  
 Standard Engineering Co., Ellwood City, Pa.  
 Taylor-Wilson Mfg. Co., Philadelphia, Pa.  
 Torrington Mfg. Co., The, Torrington, Conn. (Brass.)  
 United Engineering & Foundry Co., Pittsburg, Pa.  
 Wheeling Mold & Fdy. Co., Wheeling, W. Va.  
 Williams Tool Corp., Erie, Pa.

**MACHINES, PIPE SCREWING.**

Buckeye Traction Ditcher Co., Findlay, O.

**MACHINES, PISTON BLASTING.**

Gray—Gray Machine Tool Co., Inc., Buffalo, N. Y.

**MACHINES, PISTON, CRANKSHAFT AND RING GRINDING.**

❖ Gridley—National Acme Co., The, Cleveland, O.

**MACHINERY, PLANTATION, SUGAR, RICE AND COFFEE.**

Squier Mfg. Co., Geo. L., Buffalo, N. Y.

**MACHINES, PLASTER OF PARIS.**

Union Engineering Co., Cleveland, O.

**MACHINERY, PLATE GLASS, WIRE AND ORNAMENTAL.**

Rosedale Foundry & Machine Co., Pittsburg, Pa.

**MACHINES, POCKET CUTTING.**

Enterprise—Austin & Eddy, Boston, Mass.

**MACHINES, POINTING, BAR.**

Namco—National Acme Co., The, Cleveland, O.

**MACHINES, POLISHING AND BUFFING.**

Automatic Buffing Machine Co., Buffalo, N. Y.  
 Best, L., Co., New York, N. Y.  
 Bridgeport Safety Emery Wheel Co., The, Bridgeport, Conn.  
 ❖ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Builders Iron Foundry, Providence, R. I.  
 Clizbe—Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Curtis—Curtis Machine Corp., Jamestown, N. Y.  
 Diamond Machine Co., Providence, R. I.  
 Duplex—Duplex Moulding Sander Co., Hornell, N. Y.  
 Excelsior Tool & Machine Co., E. St. Louis, Ill.  
 Garvin Machine Co., The, New York, N. Y.  
 Grabo, E. O., New York, N. Y.  
 Hanson & Van Winkle Co., Newark, N. J.  
 Hemming Bros., Co., Inc., New Haven, Conn.  
 Hisey-Wolf Mach. Co., Cincinnati, O.  
 International Floor Machine Co., New York, N. Y.  
 Janette Mfg. Co., Chicago, Ill.  
 Johnson—U. S. Electrica Mfg. Co., Los Angeles, Cal.  
 Marschke Mfg. Co., Indianapolis, Ind.  
 M. F. D.—Meriden Press & Drop Co., The, Meriden, Conn. (for glass, marble, slate, etc).  
 Myers Machine Tool Corp., Columbia, Pa.  
 Noble & Westbrook Mfg. Co., Hartford, Conn.  
 Oakley & Jansen Machinery Co., Parkersburg, W. Va.  
 Oliver Mfg. Co., The W. W., Buffalo, N. Y.  
 Peerless Surface Machine Co., Newark, N. J.



Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Production Machine Co., Greenfield, Mass.  
 Robinson, Wm. V., Co., The, Owosso, Mich.  
 Simplex—T. P. Walls Tool & Supply Co., New York.  
 St. Louis—St. Louis Machine Tool Co., St. Louis, Mo.  
 ♦ Stewart Auto Polishing—Chicago Flexible Shaft Co., Chicago, Ill.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 V. C.—Valley City Machine Works, Grand Rapids, Mich.  
 Van Dorn—Van Dorn Electric Tool Co., Cleveland, O.  
 W. B.—San Francisco Eng. Co., San Francisco, Cal.  
 Webb Mfg. Co., Newark, N. J. (flexible shaft).  
 Weisbecker & Sons, Francis A., Brooklyn, N. Y.  
 Western—St. Louis Machine Tool Co., St. Louis, Mo.  
 Whitney Jack—The New Britain Machine Co., New Britain, Conn.  
 Wodack—Wodack Electric Tool Corp., Chicago, Ill. (portable).

#### MACHINERY, POTASH.

Willcox Engineering Co., Saginaw, Mich.

#### MACHINERY, POTTERY.

Adamson Machine Co., Akron, O.  
 American Clay Machinery Co., Bucyrus, O.  
 Automatic Rotary Pump Co., New York.  
 Bonnot Co., Canton, O.  
 Bucher-Smith—Bucher-Smith Co., The, East Liverpool, O.  
 Tri-State—Tri-State Engineering Co., Zanesville, O.  
 Williams Fdy. & Mach. Co., Akron, O.

#### MACHINERY, POWDER MINING.

The J. H. Day, Cincinnati, O.

#### MACHINERY, POWER TRANSMISSION.

Adamson Mfg. Co., Stephen, Aurora, Ill.  
 Albuquerque Foundry & Machine Works, Albuquerque, N. M.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 American Tool & Machine Co., Boston, Mass.  
 Bailey-Burruss Mfg. Co., Atlanta, Ga.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Barnard Mfg. Co., Spokane, Wash.  
 Bates Machine Co., Joliet, Ill.  
 ♦ Bond Foundry & Machine Co., Manheim, Pa.  
 Bretting Mfg. Co., C. G., Ashland, Wis.  
 Brown Co., The A. & E., New York, N. Y.  
 Caldwell, W. E., Louisville, Ky.  
 Caldwell & Son Co., The H. W., Chicago, Ill.  
 Canton Foundry & Machine Co., Canton, O.  
 Carey, W. W., Co., Lowell, Mass.  
 Chain Belt Co., Milwaukee, Wis.  
 ♦ Chicago Pulley & Shafting Co., Chicago, Ill.  
 Christiansa Machine Co., Christiansa, Pa.  
 Clark Flexible Couplings—I. H. Dexter Co., Inc., Goshen, N. Y.  
 Codd, E. J., Co., Baltimore, Md.  
 Cotton States Belting & Supply Co., Atlanta, Ga.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Dayton-Globe Iron Works Co., The, Dayton, O.  
 Diamond Iron Works, Minneapolis, Minn.  
 Diamond Textile Machine Works, Philadelphia, Pa.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Dow, L. B., Inc., Keene, N. H.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Eclipse Wood Pulley Co., Inc., Berlin, Pa.  
 Esamueller Mill Furnishings, St. Louis, Mo.  
 Falls—Falls Rivet & Machinery Co., Cuyahoga Falls, Ohio.  
 Filler & Stowell Co., The, Milwaukee, Wis.  
 Franklin Machine Co., Providence, R. I.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 Great Western Mfg. Co., Leavenworth, Kan.  
 Henderson—The W. K. Henderson Iron Works & Sup. Co., Shreveport, La.  
 Hesse-Martin Iron Works, Portland, Ore.  
 Hill & Co., Wm. E., Kalamazoo, Mich.  
 ♦ Hill Clutch Co., The, Cleveland, O.  
 Hilliard—Hilliard Clutch & Machinery Co., Elmira, N. Y.  
 Holyoke—Holyoke Machine Co., Worcester, Mass.  
 Howard Iron Works, Buffalo, N. Y.  
 Howell & Co., R. R., Minneapolis, Minn.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hunter—James Hunter Machine Co., North Adams, Mass.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Hyatt Roller Bearing Co., New York, N. Y.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 ♦ Jones Foundry & Machine Co., W. A., Chicago, Ill.  
 ♦ J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Lane & Bodley Co., The, Cincinnati, O.  
 Lenix Drive—F. L. Smith & Co., New York, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 Link Belt Supply Co., Minneapolis, Minn.  
 Lombard Iron Works & Sup. Co., Augusta, Ga.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Mesta Machine Co., The, Pittsburgh, Pa.  
 Mey—Mey Chain Belt Co., Buffalo, N. Y.

Minster Machine Co., The, Minster, O.  
 ♦ Moore & White Co., The, Philadelphia, Pa.  
 Moore-Master Mfg. Co., Chicago, Ill.  
 Morse Chain Co., The, Ithaca, N. Y.  
 Munson Mill Machinery Co., Inc., Utica, N. Y.  
 Murray, D. J., Mfg. Co., Wausau, Wis.  
 National—National Foundry Mfg. & Sup. Co., Williamsport, Pa.  
 Naylor Bros. Co., Peekskill, N. Y.  
 ♦ Nordyke & Marmon Co., Indianapolis, Ind.  
 Plamondon, A., Mfg. Co., Chicago, Ill.  
 Power & Mining Machinery Co., New York, N. Y.  
 Prescott Co., The, Menominee, Mich.  
 Prybil—The Prybil Machine Co., Inc., New York, N. Y.  
 Puget Sound Machinery Depot, Seattle, Wash.  
 Pyott Foundry Co., Chicago, Ill.  
 Pyott, Geo. W., Co., Chicago, Ill.  
 Reading Scale & Machine Co., Reading, Pa.  
 ♦ Reeves Pulley Co., Columbus, Ind.  
 Royersford Fdy. & Machine Co., Philadelphia, Pa.  
 Salem Foundry & Machine Works, Salem, Va.  
 Sellers & Co., Inc., William, Philadelphia, Pa.  
 Sharer—E. U. Scoville Co., Manlius, N. Y.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Twin City—Twin City Co., Minneapolis, Minn.  
 Union Engineering Co., Cleveland, O.  
 Union Iron Works, Decatur, Ill.  
 Union Iron Works, Selma, Ala.  
 ♦ Valley Iron Works, Williamsport, Pa.  
 ♦ Webster Mfg. Co., Chicago, Ill.  
 Weller Mfg. Co., Chicago, Ill.  
 Wheland—The Wheland Co., Chattanooga, Tenn.  
 Wolf—The Wolf Co., Chambersburg, Pa.  
 ♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

#### MACHINERY, PRESSING, FOR CLOTHES.

Beach-Russ Co., New York, N. Y.  
 Blasler-Sanborn Mfg. Co., Utica, N. Y.  
 Lexington Machine Co., Lexington, Ky.  
 Sunshine & Jasper Co., New York, N. Y.  
 Tinnis & Clissold, Bound Brook, N. J.

#### MACHINES, PROFILING, BRONZE.

American Watch Tool Co., Waltham, Mass.  
 Fischer Machine Co., Philadelphia, Pa.  
 Garvin Machine Co., New York, N. Y.  
 Leland, Gifford Co., Worcester, Mass.  
 "Oliver of Adrian"—Oliver Instrument Co., Adrian, Mich.  
 Pratt & Whitney Co., Hartford, Conn.  
 Wade American Tool Co., Waltham, Mass.

#### MACHINES, PROSPECTING, MINERAL.

Cyclone—Sanderson-Cyclone Drill Co., Orrville, O.

#### MACHINES, PULLEY BORING.

Avey Drilling Machine Co., Covington, Ky.  
 Henderson Iron Works & Supply Co., Shreveport, La.

#### MACHINERY, PULLEY, MOLDING, FINISHING, DRILLING AND TAPPING.

Cincinnati—Avey Drilling Machinery Co., Covington, Ky.  
 Enterprise—Austin & Eddy, Boston, Mass.

#### MACHINES, PULLING, WELL.

Milton—S. G. Milton & Son, Franklin, Pa.

#### MACHINERY, PUMPING.

(See "Pumps.")

Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
 McGowan—John H. McGowan Co., The, Cincinnati, O.

#### MACHINERY, PUNCHING AND SHEARING.

(See "Punches" and "Shears.")

Buffalo Forge Co., Buffalo, N. Y.  
 Heartly Machine, Variety Iron & Tool Works, Toledo, Ohio.  
 M. & M.—Mitts & Merrill, Saginaw, Mich.  
 New Doty Mfg. Co., Jeanesville, Wis.  
 Pels—Henry Pels & Co., New York, N. Y.  
 Quickwork Co., The, St. Marys, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.

#### MACHINES, PUNCHING, DRILL STEEL.

Denver Rock Drill Mfg. Co., Denver, Colo.

#### MACHINERY, QUARRYING.

Clipper—Loomis Machine Co., Tiffin, O.  
 ♦ Jeffrey Mfg. Co., The, Columbus, O.  
 Osgood Co., The, Marion, Ohio.  
 Ruggles Machine Co., Poughkeepsie, N. Y.  
 Sullivan Machinery Co., Chicago, Ill.  
 MACHINES, QUENCHING, FOR HARDENING GEARS.  
 Browning—Machine Products Co., Cleveland, O.



**MACHINES, RACK CUTTING.**

Adams Co., Dubuque, Ia.  
 Fellows Gear Shaper Co., Springfield, Vt.  
 Flather, E. J., Mfg. Co., Nashua, N. H.  
 Gould & Everhardt, Newark, N. J.  
 ♦ Jeffrey Mfg. Co., The, Columbus, O.  
 LeBlond Machine Tool Co., Cincinnati, O.  
 Reed-Prentice Co., Worcester, Mass.  
 Sloan & Chace Mfg. Co., Ltd., Newark, N. J.

**MACHINES, RAMMING FOUNDRY.**

Herman Pneumatic Machine Co., Zellenople, Pa.  
 Oldham—Geo. Oldham & Son Co., Philadelphia.  
 Wadsworth Core Machine & Equipment Co., The, Akron, O.

**MACHINES, REAMING, (Socket).**

Diamond Machine Co., Providence, R. I.  
 Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

**MACHINES, RECLAIMING, SCRAP.**

Ajax Mfg. Co., Cleveland, O.  
 M. & M.—Mitts & Merrill, Saginaw, Mich.

**MACHINES, RE-SAW.**

Chase Turbine Mfg. Co., Orange, Mass.  
 Diamond Iron Works, Minneapolis, Minn.  
 Mershon, Wm. B. & Co., Saginaw, Mich.  
 Oliver—Oliver Machinery Co., Grand Rapids, Mich.  
 Yates, P. B., Machine Co., Beloit, Wis.

**MACHINES, RESEATING, FOR BOILER HEADERS.**

Lagonda—Lagonda Mfg. Co., Springfield, O.

**MACHINERY, RICE MILL.**

Bailey-Burruss Mfg. Co., Atlanta, Ga.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Engelberg—Engelberg Huller Co., Syracuse, N. Y.  
 Monitor—Howes, The S., Co., Silver Creek, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Schule, F. H., Co., New York, N. Y.  
 Sprout, Waldron & Co., Muncey, Pa.  
 Squier, Geo. L., Mfg. Co., Buffalo, N. Y.  
 Wolf Company, The, Chambersburg, Pa.

**MACHINES, RIFLING GUN BARREL.**

Diamond Machine Co., Providence, R. I.  
 Pratt & Whitney Co., Hartford, Conn.  
 Victor—International Engineering Co., Cleveland, O.

**MACHINES, RIVETING.**

Badger—Rock River Machine Co., Janesville, Wis.  
 Bilton Machine Tool Co., The, Bridgeport, Conn.  
 Black Diamond—Black Diamond Saw & Machine Works, Natick, Mass.  
 Blomquist-Eck Machine & Mfg. Co., Cleveland, O.  
 Grant Noiseless—Grant Mfg. & Machine Co., Bridgeport, Conn.  
 Hardsocg—Wonder Drill Co., Ottumwa, Iowa.  
 Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.  
 Hemming Bros., New Haven, Conn.  
 Hubbell—Standard Mfg. Co., Bridgeport, Conn.  
 Ingersoll-Rand Co., New York, N. Y.  
 Little David, Imperial—Long & Alistatter Co., The, Hamilton, O.  
 Manufacturers Belt Hook Co., Chicago, Ill. (hand and foot).  
 Monitor—Huntley Mfg. Co., Silver Creek, N. Y.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Kobert—The New England Wire Machinery Co., New Haven, Conn.  
 Ryerson, Jos. T. & Son, Chicago, Ill.  
 Spinhammer—Pressed Metal Machinery Co., Chicago, Ill.  
 Stearns, E. C. & Co., Syracuse, N. Y.  
 Townsend Mfg. Co., H. P., Hartford, Conn.  
 Watson-Stillman Co., Aldene, N. J.

**MACHINERY, RIVET SPINNING.**

Ajax Mfg. Co., Cleveland, O.  
 Baird Machine Co., Bridgeport, Conn.  
 Cook, Asa S., Co., Hartford, Conn.  
 Greiner, Chas., Co., New Haven, Conn.  
 Manville, E. J., Machine Co., Waterbury, Conn.  
 Swaine, Fred J., Mfg. Co., St. Louis, Mo.  
 Waterbury Farrell Fdry. & Mach. Co., Waterbury, Conn.

**MACHINERY, ROAD MAKING.**

Acme Road Machinery Co., Frankfort, N. Y.  
 Albany Iron Works, Albany, Ore.  
 Austin Bros., Atlanta, Ga.  
 Austin-Western Road Machinery Co., Chicago, Ill.  
 Avery Company, Peoria, Ill.  
 Buckeye—Buckeye Traction Ditcher Co., Findlay, O.  
 Buffalo Steam Roller Co., Buffalo, N. Y.  
 Case, J. I., Threshing Machine Co., Inc., Racine, Wis.  
 Champion—Good Roads Machinery Co., Kennett Square, Pa.

Emerson-Brantingham Implement Co., Rockford, Ill.  
 Erie Machine Shops, Erie, Pa.  
 Fresno, Sidney—Sidney Steel Scraper Works, Sidney, O.  
 Gade Bros. Mfg. Co., Iowa Falls, Ia.  
 Gallon Iron Works & Mfg. Co., Gallon, O.  
 Glide Road Machine Co., Minneapolis, Minn.  
 Globe Machinery & Supply Co., Des Moines, Ia.  
 Huber Mfg. Co., Marion, O.  
 Iroquois, Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.

♦ Jeffrey Mfg. Co., Columbus, O.  
 Kelly Springfield Road Roller Co., Springfield, O.  
 Link-Belt Company, Chicago, Ill.  
 Ohio Road Machinery Co., Oberlin, Ohio.  
 Owensboro Ditcher & Grader Co., Inc., Owensboro, N. Y.  
 Perfection—Buckeye Traction Ditcher Co., Findlay, Ohio.  
 Phoenix—Phoenix Mfg. Co., Eau Claire, Wis.  
 Pioneer Special—Pioneer Traction Mfg. Co., Winona, Minn.  
 Quick Lift—Stockland Road Machinery Co., Minneapolis, Minn.  
 Reliance—Universal Road Machinery Co., Kingston, N. Y.  
 Russell & Co., The, Massillon, O.  
 Syracuse Chilled Plow Co., Syracuse, N. Y.  
 Tarrant Mfg. Co., Saratoga, N. Y.  
 Troy, Jr., W. B., Memphis, Tenn.  
 Twenty-Century—Baker Mfg. Co., The, Springfield, Ill.  
 Western Wheel Scraper Co., Aurora, Ill.

**MACHINERY AND EQUIPMENT, ROD MILL.**

Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.

**MACHINES, ROLL TAPERING OR FORGING.**

Williams, White & Co., Moline, Ill.

**MACHINERY, ROLLING MILL.**

Ajax Mfg. Co., The, Cleveland, O.  
 Alliance Machine Co., Alliance, O.  
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 Axelson Machine Co., Los Angeles, Cal.  
 Bertsch & Co., Cambridge City, Ind.  
 Birdsboro Steel Fdry. & Machine Co., Birdsboro, Pa.  
 Blake & Johnson Co., Waterbury, Conn.  
 Bucyrus Steel Casting Co., Bucyrus, O.  
 Carroll Foundry & Machine Co., Bucyrus, O.  
 Cooper—C. & G. Cooper Company, Mt. Vernon, O.  
 Diamond Machine Co., Monongahela, Pa.  
 Elyria Machine Co., Elyria, O.  
 Farrell Foundry & Mach. Co., Ansonia, Conn.  
 Fawcus—Fawcus Machine Co., Pittsburg, Pa.  
 Garrison, A., Foundry Co., Pittsburg, Pa.  
 Hilles & Jones Co., Wilmington, Del.  
 Hubbard Steel Foundry Co., East Chicago, Ind.  
 Hyde Park Fdry. & Mach. Co., Hyde Park, Pa.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Johnston & Jennings Co., The, Cleveland, O.  
 Kane & Roach, Syracuse, N. Y.  
 Lake Erie Engineering Works, Buffalo, N. Y.  
 Link-Belt Company, Chicago, Ill.  
 Mackintosh, Hemphill & Co., Pittsburg, Pa.  
 Mesta Machine Co., Pittsburg, Pa.  
 Mine & Smelter Supply Co., Salt Lake City, Utah.  
 Morgan Construction Co., Worcester, Mass. (for billets, merchant bars, small shapes, skelp, hoops, cotton ties and wire rods).  
 Morgan Engineering Co., Alliance, O.  
 National Roll & Foundry Co., Avonmore, Pa.  
 Oliver Quality—W. W. Oliver Mfg. Co., Buffalo, N. Y.  
 Pfannmueller Engineering Co., Chicago, Ill.  
 Pulaski Foundry & Mfg. Corp., Pulaski, Va.  
 Rosedale Fdry. & Mach. Co., Pittsburg, Pa.  
 Standard Engineering Co., Elwood City, Pa.  
 Standard Machinery Co., Providence, R. I.  
 Taylor-Wilson Mfg. Co., Philadelphia, Pa.  
 Tod, Wm., Co., Youngstown, O.  
 Toronto Foundry & Machine Co., Inc., Toronto, O.  
 Torrington Mfg. Co., Torrington, Conn. (Brass and copper).  
 Tread-Kill—M. H. Treadwell Co., New York, N. Y.  
 Union Foundry & Machine Co., Pittsburg, Pa.  
 United Engineering & Fdry. Co., Pittsburg, Pa.  
 Waterbury Farrell Fdry. & Mach. Co., Waterbury, Conn.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Wheeling Mold & Fdry. Co., Wheeling, W. Va.  
 Woodard Machine Co., The, Wooster, Ohio.  
 Youngstown Fdry. & Mach. Co., Youngstown, O.

**MACHINERY AND EQUIPMENT, RUBBER FACTORY.**  
(For mill room and reclaiming department; also hydraulic presses.)

Adamson Machine Co., Akron, O.  
 Akron Gear & Engineering Co., Akron, O.  
 Allen Machine Co., Erie, Pa.  
 American Tool & Machine Co., Boston, Mass.  
 Biggs Boiler Works Co., The, East, Akron, O.  
 Birmingham Iron Foundry, Derby, Conn.  
 Boomer & Boschert Press Co., Syracuse, N. Y.

Buffalo Foundry & Machine Co., Buffalo, N. Y.  
 Curtis & Marble Machine Co., Worcester, Mass.  
 Dove Machine Co., Inc., Lawrence, Mass.  
 Elmes, Chas. F., Engineering Work, Chicago.  
 Elyria Machine Co., Elyria, O.  
 Enterprise Co., The, Columbiana, Ohio.  
 Housatonic Machine & Tool Co., Bridgeport, Conn.  
 Knight Mfg. Co., Canton, Ohio (tire machine).  
 McFoundry Foundry & Machine Co., Trenton, N. J.  
 Miller, Charles E., Anderson, Ind.  
 Monarch Machinery Co., New York, N. Y.  
 New England Butt Co., Providence, R. I.  
 Ornamental Iron Work Co., Akron, O.  
 Reynolds Machine Co., Massillon, O.  
 Royte & Sons, John, Paterson, N. J.  
 Textile Finishing Machinery Co., Providence, R. I.  
 Throop & Sons' Co., Wm. R., Trenton, N. J.  
 Trenton Machine Specialty Co., Trenton, N. J.  
 Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.  
 Wellman Company, Medford, Mass. (cutters).  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Williams Foundry & Machine Co., Akron, O.  
 Wood & Co., R. D., Philadelphia, Pa.

#### MACHINES, RUBBING.

Superior—Rockford Tool Co., Rockford, Ill.

#### MACHINES, SACK FILLING.

Link-Belt Company, Chicago and Philadelphia.  
 Perfection Bag Holder—Enterprise Utility Mfg. Co., Chicago.  
 Pratt Engineering & Mach. Co., Atlanta, Ga.

#### MACHINERY, SALT WORKS.

Bay City Iron Co., Bay City, Mich.  
 Stroud, E. H., & Co., Chicago, Ill.  
 Wilcox Engineering Co., Saginaw, Mich.

#### MACHINES, SAND CUTTING.

American Foundry Equipment Co., New York, N. Y.

#### MACHINERY, SAND AND GRAVEL PRODUCING.

Chain Belt Co., Milwaukee, Wis.  
 Gallon Iron Works & Mfg. Co., Gallon, O.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Lewistown Foundry & Machine Co., Lewistown, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Mansfield Engineering Co., Indianapolis, Ind.  
 Sauerman Bros., Chicago, Ill.  
 Smith Engineering Works, Milwaukee, Wis.

#### MACHINES, SANDING AND POLISHING.

Beach—Beach Mfg. Co., Montrose, Pa.  
 Bentel & Margendant, Hamilton, O.  
 Curtis Machine Corp., Jamestown, N. Y.  
 Dull, Raymond W., Co., Chicago, Ill.  
 Duplex—Duplex Moulding Sander Co., Hornell, N. Y.  
 Esco—Electric Specialty Co., Stamford, Conn.  
 Eureka—Eureka Sander Co., Racine, Wis.  
 Globe Inventing Co., Chicago, Ill.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Nash, J. M., Milwaukee, Wis.  
 Oakley & Jansen Machinery Co., Parkersburg, W. Va.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Peerless—Peerless Surfacing Machine Co., Troy, N. Y.  
 Pioneer—Austin & Eddy, Boston, Mass.  
 Plank—Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Pringle & Brodie Machinery Co., Chicago, Ill.  
 Rockford—Rockford Tool Co., Rockford, Ill.  
 Smith—H. B. Smith Machine Co., Smithville, N. J.  
 Spiral—The Kent Mfg. Co., Faribault, Minn.  
 Syracuse, Emmert—Emmert Mfg. Co., Waynesboro, Pa.  
 Syracuse Sander Mfg. Co., Inc., Syracuse, N. Y.  
 The Superior Line—The Jansen-Peterson Co., Cleveland, O.  
 Valley Machine Co., Parkersburg, W. Va.  
 West Side—West Side Iron Works, Grand Rapids, Mich.  
 Yates, P. B., Machine Co., Beloit, Wis.

#### MACHINES, SATURATING AND PARAFFINE.

Black-Clawson Co., Hamilton, Ohio.

#### MACHINES, SAWING, FILING & LAPPING.

Bradley-Gin—Bradley-Gin Saw Filer Co., Dallas, Texas.

#### MACHINES, SAWDUST GRINDING.

Brown, A. & F., Co., New York, N. Y.  
 Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, SAW MILL.

Abbott, D. S., Co., The, Olean, N. Y.  
 Adams Co., W. T., Corinth, Miss.  
 Albany Iron Works, Albany, Ore.  
 Allis-Chalmers Co., Milwaukee, Wis.

American—American Saw Mill Machinery Co., Hackensack, N. J. (shingle, lath, cordwood, splitters, drag-saw, gang-edgers, lumber trimmers, saw mandrels, circular saws, planers and matchers).  
 Bartley & Sons, Wm., Bartley, N. J.  
 Bretting Mfg. Co., C. J., Ashland, Wis.  
 Chandler & Taylor Co., Indianapolis, Ind.  
 Chapman's, T. M., Sons Co., Old Town, Me.  
 Chase Turbine Mfg. Co., Orange, Mass. (Water wheels, saw mills, shingle and automatic box machinery, planers, clippers and edgers.)

Clark—Clark Bros. Co., Olean, N. Y.  
 Columbus Iron Works, Chattanooga, Tenn.  
 Corinth Machinery Co., Corinth, Miss.  
 DeLoach-Mill Mfg. Co., Chattanooga, Tenn.  
 Diamond Iron Works, Minneapolis, Minn.  
 Eclipse—Frick Co., Waynesboro, Pa.  
 Emerson Brantingham Co., Rockford, Ill.  
 Enterprise—The Enterprise Co., Columbiana, O.  
 Farquhar Co., A. B., York, Pa.  
 Filer & Stowell Co., The, Milwaukee, Wis.  
 Fisher & Davis Mfg. Co., St. Louis, Mo.  
 Fischer Machine Works, Chicago, Ill.  
 Flint & Walling Mfg. Co., Kendallville, Ind.  
 Frick Co., Waynesboro, Pa.  
 Giant—General Supply & Machine Co., Meridian, Miss.  
 Henderson Iron Works & Supply Co., Ltd., W. K. Shreveport, La.  
 Hercules—American Saw Mill Mach'y Co., Hackettstown, N. J.  
 Hesse-Martin Iron Works, Portland, Ore.  
 Hill-Curtis Co., Kalamazoo, Mich.

♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind. (band saws, circular saws, carriages, head blocks, engines, boilers, edgers, trimmers, log turners, rip saws, saw tables, steam feeds, governors whistles).

Howell—R. R. Howell & Co., Minneapolis, Minn.  
 Hustler—Salem Iron Works, Winston-Salem, N. C. (sawmills, planers, matchers).

Ireland—Ireland Machine & Fdy. Co., Norwich, Conn.

♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.

Jones—Huntsville Foundry & Machine Co., Huntsville, Ala.

Knight Mfg. Co., The, Canton, O. (Carriages, head blocks, dogs, edgers, saws.)

Lane Mfg. Co., Montpelier, Vt. (Circular.)

Liddell Co., Charlotte, N. C.

Lindahl Machine Co., Henry, Chicago, Ill.

Link-Belt Company, Chicago and Philadelphia.

Lombard Iron Works & Supply Co., Augusta, Ga.

Lufkin Foundry & Machine Co., Lufkin, Tex.

Mahoney Machinery Co., Erie, Pa.

M. & M.—Mansfield Machinery Works, Mansfield, O.

McDonough Mfg. Co., Eau Claire, Wis. (Resaws, edgers, carriages, band mills, trimmers, conveyors, etc.)

Memphis Machine Works, Memphis, Tenn. (Sawmills, carriages, edgers, trimmers, slab slashers and conveyors, elevators, rolls, log turners, niggers, rip and swing cut-off saws, feeds, bull wheels, etc.)

Mershon, Wm. B., & Co., Saginaw, Mich.

Mitt & Merrill, machinery, Saginaw (hogs).

Multnomah Iron Works, Portland, Ore.

Phoenix Mfg. Co., Eau Claire, Wis.

Prescott Co., The, Menominee, Mich.

Puget Sound Machinery Depot, Seattle, Wash.

Raleigh Iron Works Co., Raleigh, N. C.

Reeves & Co., Columbus, Ind.

Russell & Co., The, Massillon, O. (Circular.)

Salem Iron Works, Winston-Salem, N. C.

Seibert & Co., Louis, L., Cincinnati, O.

Southern Engine Boiler Works, Jackson, Tenn.

Standard Saw Mill Machinery Co., Erie, Pa.

Star Machinery Co., Seattle, Wash.

Tower—Gordon Hollow Blast Grate Co., Greenville, Mich. (edgers and trimmers).

United States Machine Co., Williamsport, Pa.

Vance—J. A. Vance Co., Winston-Salem, N. C.

Weintz Bros., Evansville, Ind.

Wheland—The Wheland Co., Chattanooga, Tenn. (Circular and band.)

Whitney, Barter D., & Son, Winchendon, Mass. (Surfacers.)

Wickes Bros., Saginaw, Mich.

Yates, P. B., Machine Co., Beloit, Wis.

#### MACHINES, SAW SETTING AND FILING.

♦ Atkins, E. C., & Co., Indianapolis, Ind.

American, Grip-Feed—American Saw Filing Machine Co., Boston 14, Mass.

Baldwin, Tuthill & Bolton, Grand Rapids, Mich.

Bauer—Timmis & Clissold, Bound Brook, N. J.

Bauer—Zeiler & Nagel, Brooklyn, N. Y.

Black Diamond Saw & Machine Works, Natick, Mass.

Colts T. & C.—Timmis & Clissold, Bound Brook, N. J.

Creasy—Creasy Rotary Filer Co., The, Ballinger, Tex.

Espen—Lucas Machine Works, Philadelphia, Pa.

Grimes & Harris, Leominster, Mass.

Hanchett Swaze Works, Big Rapids, Mich.

New Britain Machine Co., New Britain, Conn.

Rogers, S. C., & Co., Buffalo, N. Y.

Rotary File & Machine Co., Brooklyn, N. Y.

♦ Simonds Mfg. Co., Fitchburg, Mass.

Wardwell Mfg. Co., Cleveland, O.  
Wilson Saw & Mfg. Co., Port Huron, Mich.  
Zeiller & Nagel, Brooklyn, N. Y.

### MACHINES, SCARPHING.

Hilles & Jones Co., Wilmington, Del.

### MACHINERY, SCREENING, FOR ROCK, GRAVEL, ETC.

Bailey-Burruss Mfg. Co., Atlanta, Ga.  
Bartlett & Snow Co., The C. O., Cleveland, O.  
Batavia Engineering Works, Batavia, Ill.  
Chain Belt Co., Milwaukee, Wis.  
Davis Foundry & Machine Works, Rome, Ga.  
Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
Kennedy-Van Saun Mfg. & Eng. Co., New York, N. Y.  
Link-Belt Company, Chicago and Philadelphia.  
Meese & Gottfried Co., San Francisco, Cal.  
Newaygo—Sturtevant Mill Co., Boston, Mass.  
Stephens-Adams Mfg. Co., Aurora, Ill.  
Tyler, The W. S., Co., Cleveland, O.  
Webster Mfg. Co., Chicago, Ill.

### MACHINES, SCREW, AUTOMATIC.

Acme—National Acme Co., The, Cleveland, O.  
Bardons & Oliver, Cleveland, O.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Camco—Chicago Automatic Machine Co., Chicago, Ill.  
Cincinnati Acme—The Acme Machine Tool Co., Cincinnati.  
Cincinnati—Cincinnati Automatic Machine Co., Cincinnati, O.  
Cleveland Automatic Machine Co., Cleveland, O.  
Cone Automatic Machine Co., Inc., Windsor, Vt.  
Davenport—Davenport Machine Tool Co., Rochester, N. Y.  
Dresses Machine Tool Co., Cincinnati, O.  
Eastern Machine Screw Corp., New Haven, Conn.  
Foster Machine Co., Elkhart, Ind.  
Garvin Machine Co., The, New York, N. Y.  
Gridley—National Acme Co., Cleveland, O.  
Himoff Machine Co., New York, N. Y.  
Hoosier—Hoosier Motor Co., Goshen, Ind.  
McCabe, J. J., Lathe & Mach. Corp., New York, N. Y.  
McKay, Geo. C., Cleveland, O.  
Oliver Machinery Co., Grand Rapids, Mich.  
Patton, Jas. F., Machine Mfg. Co., Cleveland, Ohio.  
Peerless Automatic Machine Co., Cleveland, O.  
Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
Pratt & Whitney Co., Hartford, Conn.  
Radical—Springfield Auto Screw Machine Corp., Fitchburg, Mass.  
Ramsdell Specialty Co., Worcester, Mass.  
Smurr & Kamen Machine Co., Chicago, Ill.  
Stecher, Chas., Co., The, Chicago, Ill.  
Tilted Turret—Wood Turret Machine Co., Brazil, Ind.  
Townsend, H. P., Mfg. Co., Hartford, Conn.  
Universal—New Britain Machine Co., New Britain, Conn.  
Warner & Swasey Co., The, Cleveland, O. (turret).  
Waterbury-Farrel Foundry & Machine Co., The, Waterbury, Conn.  
Windsor Machine Co., Windsor, Vt.

### MACHINES, SCREW CUTTING.

Betts Machine Co., Wilmington, Del.  
Champion Blower & Forge Co., Lancaster, Pa.  
Chicago Automatic Machine Co., Chicago, Ill.  
Wells—Greenfield Tap & Die Corp., Greenfield, Mass.

### MACHINES, SCREW, HAND.

Bardons & Oliver, Cleveland, O.  
Hartness—Jones & Lamson Machine Co., Springfield, Vt.  
Pratt & Whitney Co., Hartford, Conn.  
Stecher—The Chas. Stecher Co., Chicago, Ill.

### MACHINES, SCREWDRIVING.

Chicago General Purpose Machine—Chicago Flexible Shaft Co., Chicago, Ill.  
Hisey-Wolf Machine Co., The, Cincinnati, O.  
Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
Reynolds—The Reynolds Machine Co., Massillon, O.

### MACHINES, SCREW, HEAD SHAVING.

Garvin Machine Co., The, New York, N. Y.

### MACHINES, SCREW SLOTTING.

Acme Semi-Automatic—The National-Acme Mfg. Co., Cleveland, O.  
Betts Machine Co., Wilmington, Del.  
Garvin Machine Co., The, New York, N. Y.  
Langeller Mfg. Co., Providence, R. I.  
Namco—National Acme Co., The, Cleveland, O.  
Newton—Newton Machine Tool Works, Inc., Philadelphia, Pa.  
Sellers & Co., Inc., Wm., Philadelphia, Pa.  
Standard—The Standard Mfg. Co., Bridgeport, Conn.

### MACHINES, SCREW THREADING.

Geometric—Geometric Tool Co., New Haven, Conn.

### MACHINERY, CARTON SEALING, WEIGHING, WAX WRAPPING, AUTOMATIC.

Improved Johnson—National Packaging Machinery Co., Boston, Mass.

### MACHINES, SEAM ROLLING.

Niagara Machine & Tool Works, Buffalo, N. Y.  
Winterhoff Tool & Machine Co., Elkhart, Ind.

### MACHINES, SENSITIZING.

Duplex, Simplex—C. F. Pease Co., Chicago, Ill.

### MACHINES, SEWER CLEANING.

Duplex—Duplex Mfg. Co., Philadelphia, Pa.  
Shannon Co., J. H. & R., Jersey City, N. J.  
Turbine—Turbine Sewer Machine Co., Milwaukee, Wis.

### MACHINES, SEWER AND TRENCH DIGGING.

Potter Mfg. Co., Indianapolis, Ind.  
Union—Union Iron Works, Hoboken, N. J.

### MACHINERY, SEWER PIPE.

American Can Co., Chicago, Ill.  
Pioneer—The Taplin-Rice-Clerkin Co., Akron, O.  
Pioneer Mfg. Co., Waterloo, Ia.

### MACHINERY AND TOOLS, SHEET METAL WORKING.

Adriance Machine Works, Inc., Brooklyn, N. Y.  
Ainslie Machine & Tool Works, Hartford, Conn.  
American Tool Works Co., The, Cincinnati, O.  
Ams Machine Co., Max, Mt. Vernon, N. Y.  
Atlas Machine Co., The, Waterbury, Conn.  
Badger State—Badger State Machine Works, Beloit, Wis.  
Bertsch & Co., Cambridge City, Ind.  
Bliss—E. W. Bliss & Co., Brooklyn, N. Y.  
Buckeye Engine Co., Salem, O.  
Canton Foundry & Machine Co., Canton, O.  
Cleveland Machine & Mfg. Co., The, Cleveland, O.  
Dreis & Krump Mfg. Co., Chicago, Ill.  
Ferracute Machine Co., Bridgeton, N. J.  
Hallden Machine Co., Waterbury, Conn. (straightening and cutting).  
Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.  
Henry-Wright Mfg. Co., Hartford, Conn.  
Kane & Roach, Syracuse, N. Y.  
Leffler & Co., Chas., Brooklyn, N. Y.  
Milwaukee Metal Working Co., Milwaukee, Wis.  
Newman Machine Co., Greenboro, N. C.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Ohi & Co., Geo. A., Newark, N. J.  
Poorman-Streine Tool & Mfg. Co., The, New Bremen, O.  
Quickwork Co., The, St. Marys, O.  
Robinson, J. M. Mfg. Co., The, Cincinnati, O.  
San Francisco Engineering Co., San Francisco, Cal.  
Savage, W. G., Co., Knoxville, Tenn.  
Stoll, D. H., Co., Inc., Buffalo, N. Y.  
Swaine Mfg. Co., The Fred J., St. Louis, Mo.  
Swain Mfg. Co., The Fred J., St. Louis, Mo.  
Toledo—Toledo Machine & Tool Co., Toledo, O.  
V. & O. Press Co., The, Glendale, L. I., N. Y.  
Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn.  
W. B.—San Francisco Engineering Co., San Francisco  
Yoder—The C. M. Yoder Co., Cleveland, O.  
Zeh & Hahenmann Co., Newark, N. J.  
Zenite Metal Co., Indianapolis, Ind.

### MACHINERY, SHINGLE AND LATH MILL.

American—American Saw Mill Machinery Co., Hackettstown, N. J.  
Atlanta—Southern Saw & Machinery Works, Atlanta, Ga.  
Bartlett, A. F., & Co., Saginaw, Mich.  
Birdsall—Birdsall Engine Co., Auburn, N. Y.  
Chapman's Sons Co., T. M., Old Town, Me.  
Chase Turbine Mfg. Co., Orange, Mass.  
Chattanooga Machinery Co., Chattanooga, Tenn.  
Corinth Machinery Co., Corinth, Miss.  
De Loach Mill Mfg. Co., Chattanooga, Tenn.  
Diamond—Diamond Iron Works, Minneapolis, Minn.  
Hill-Curtis Co., Kalamazoo, Mich.  
Ireland—Ireland Machine & Foundry Co., Norwich, N. Y.  
Kline, Lewis T., Alpena, Mich.  
Knight Mfg. Co., The, Canton, O.  
Lane Mfg. Co., Montpelier, Vt.  
Langeller Mfg. Co., Arlington, Cranston, R. I.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
M. & M.—Mitts & Merrill, Saginaw, Mich.  
Oliver Machinery Co., Grand Rapids, Mich.  
Perkins & Co., Grand Rapids, Mich.  
Puget Sound Machinery Depot, Seattle, Wash.  
Standard Saw Mill Machinery Co., Erie, Pa.  
Star Machinery Co., Seattle, Wash.

Street Brothers Machine Works, Chattanooga, Tenn.  
Trevor Mfg. Co., Lockport, N. Y.  
United States Machine Co., Williamsport, Pa.  
Williams, Cliff, Machine Co., Meridian, Miss.

#### MACHINERY, SHIP, AUXILIARY.

Hesse—Martin Iron Works, Portland, Ore.

#### MACHINERY, SHIPYARD.

Southwark Foundry & Machine Co., Philadelphia, Pa.  
Star Machinery Co., Seattle, Wash.  
Woods Machine Co., S. A., Boston, Mass.  
Trevor Mfg. Co., Lockport, N. Y.

#### MACHINES, SHORT LOG SAWING.

◆Hoesler—The Sinker-Davis Co., Indianapolis, Ind.

#### MACHINES, SHOVEL.

Lake Shore Engine Works, Marquette, Mich.  
Toledo Machine & Tool Co., Toledo, Ohio.

#### MACHINERY, SHRAPNEL & EXPLOSIVE SHELL.

Cleveland Automatic Machine Co., Cleveland, O.

#### MACHINERY, SHREDDING.

American Pulverizer Co., St. Louis, Mo.  
E. H. Stroud & Co., Chicago, Ill.  
◆Jeffrey Mfg. Co., The, Columbus, O.  
M. & M.—Mitts & Merrill, Saginaw, Mich.  
William Patent Crusher & Pulverizer Co., St. Louis, Mo.

#### MACHINES, SLAB BARKING.

Fulton Machine & Vise Co., Lowville, N. Y.

#### MACHINERY, SLATE WORKING.

Bickford Machine Co., Greenfield, Mass.  
Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
Flory Mfg. Co., S., Bangor, Me.

#### MACHINES, SLITTING, METAL.

Bilton—Bilton Machine Tool Co., Bridgeport, Conn.  
Blake & Johnson Co., Waterbury, Conn.  
Buffalo Forge Co., Buffalo, N. Y.

#### MACHINES, SLOTTING.

Bilton Machine Tool Co., Bridgeport, Conn.  
Betts Machine Co., Inc., Rochester, N. Y.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Craftsman Tool Co., The, Conneaut, Ohio.  
Dill—T. C. Dill Machine Co., Philadelphia, Pa.  
Garvin Machine Co., New York, N. Y.  
Mulr—Alfred Herbert, Ltd., New York, N. Y.  
Putnam—Manning Maxwell & Moore, Inc., Fitchburg, Mass.  
Racine Tool & Machine Co., Racine, Wis.  
Rhodes Mfg. Co., Hartford, Conn.

#### MACHINERY, SMELTING.

(See also Machinery, Mining.)

Traylor Engineering & Mfg. Co., Allentown, Pa.

#### MACHINES, SMOKE TEST.

Always Reliable—Otto Bernz Co., Newark, N. J.  
Beekman—Garrison Brass & Machine Works, New York.  
Bernz, Otto, Co., Newark, N. J.  
Eureka—Bailey & Farrell Mfg. Co., Pittsburgh, Pa.

#### MACHINES, SNIPING.

Waymoth—A. D. Waymoth & Co., Fitchburg, Mass.

#### MACHINERY, SOAP & CANDLE.

Brown & Patterson, Brooklyn, N. Y.  
Dopp—Sowers Mfg. Co., Buffalo, N. Y.  
Houchin-Aiken Co., Brooklyn, N. Y.  
Sowers Mfg. Co., Buffalo, N. Y.  
William Patent Crusher & Pulverizer Co., St. Louis, Mo.

#### MACHINES, SPINNING METAL.

Grant Mfg. & Machine Co., Bridgeport, Conn.

#### MACHINES, SPIKE.

Youngstown Foundry & Machine Co., Youngstown, Ohio.

#### MACHINES, SPLINE.

Barber-Colman Company, Rockford, Ill.  
Pratt & Whitney Co., Hartford, Conn.

#### MACHINERY, SPOOL AND BOBBIN.

Defiance Machine Works, The, Defiance, O.  
Goodspeed Machine Co., Winchendon, Mass.

#### MACHINES, SPRAYING.

(See also "Pumps, Spray.")

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
Ajax, Hercules—The Humphreys Mfg. Co., Mansfield, O.  
Binks—Binks Spray Equipment Co., Chicago, Ill.  
◆Deming Co., The, Salem, O. Trade names, Deming.  
Adapter, Liberty Sprayer, Planter's Tractor, Victory, Victory Junior.  
Hurst—H. L. Hurst Mfg. Co., Greenwich, O.  
Lanson-Lawton Co., De Pere, Wis.  
Niagara Sprayer Co., Middleport, N. Y.  
Ohio-M—Dayton Manufacturing Co., Dayton, O.  
Paragon—The Campbell-Hausfeld Co., Harrison, O.  
Seattle Brass Co., Seattle, Wash.

#### MACHINES, SPRING MAKING.

Baird Machine Co., Bridgeport, Conn.  
Chambersburg Engineering Co., Chambersburg, Pa.  
Coulter & McKenzie Machine Co., Bridgeport, Conn.  
Garvin Machine Co., New York, N. Y.  
Houchin-Aiken Co., Brooklyn, N. Y.  
Shuster, F. B., Co., New Haven, Conn.  
Sleeper & Hartley, Inc., Worcester, Mass.

#### MACHINERY, STAPLE, WIRE.

Adt & Son, John, New Haven, Conn.  
Baird Machine Co., Bridgeport, Conn.  
Shuster, F. B., Co., New Haven, Conn.

#### MACHINERY, STARON FACTORY.

Davenport Machine & Foundry Co., Davenport, Ia.  
Elmes, Charles F., Engineering Wks., Chicago, Ill.  
◆Nordyke & Marmon Co., Indianapolis, Ind.  
Stroud, E. H., & Co., Chicago, Ill.

#### MACHINERY, STAVE.

◆American Saw Mill Machinery Co., Hackettstown, N. J.  
Chattanooga Mach'y Co., Chattanooga, Tenn.  
Oram, John S., Co., Cleveland, O.  
Street Brothers Machine Works, Chattanooga, Tenn.  
Trevor Mfg. Co., Lockport, N. Y.

#### MACHINERY, STAY BOLT.

Acme Machinery Co., Cleveland, O.  
Foote-Burt Co., Cleveland, O.  
◆Harrington Son & Co., Inc., Edwin, Philadelphia, Pa.  
Landis Machine Co., Waynesboro, Pa.  
Modern Tool Co., Erie, Pa.  
Richmond Metal Products Co., Inc., Richmond, Va.

#### MACHINERY, STEEL WIRE MILL.

Morgan Construction Co., Worcester, Mass.

#### MACHINERY AND EQUIPMENT, STEEL WIRE MILL. (WIRE, NAIL, FENCE AND GALVANIZING.)

Diamond Machine Co., Monongahela, Pa.  
Standard Machinery Co., Providence, R. I.  
Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O.

#### MACHINERY, STEERING WHEEL RIM.

Defiance Machine Works, Defiance, Ohio.

#### MACHINES, STENCIL CUTTING.

Bradley—Bradley Stencil Machine Co., St. Louis, Mo.  
Bradley, A. J., Mfg. Co., New York, N. Y.

#### MACHINES, STOCK STRAIGHTENING.

◆Medart Patent Pulley Co., St. Louis, Mo.  
Standard Machinery Co., Providence, R. I.

#### MACHINERY, STONE WORKING.

Bedford—Bedford Foundry & Machine Co., Bedford, Ind.  
Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.  
Williams Machine Co., Poultney, Vt.

#### MACHINERY, SUGAR BEET HANDLING.

Link-Belt Company, Chicago and Philadelphia.  
Weller Mfg. Co., Chicago, Ill.

#### MACHINERY OR MILLS, SUGAR PULVERIZING.

Abbe—Abbe Engineering Co., New York, N. Y.

#### MACHINERY, SUGAR AND SYRUP MILL.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
American Tool & Machine Co., Boston, Mass.  
Bay City Iron Co., Bay City, Mich.  
Bufflovak—Buffalo Foundry & Machine Co., Buffalo, N. Y.  
Denver Engineering Works Co., Denver, Colo.  
Farrell Foundry & Machine Co., Ansonia, Conn.  
Fulton Iron Works, St. Louis, Mo. (Cane crushers.)

Hooven, Owens, Rentschler Co., Hamilton, O.  
Imperial-Pratt Engineering & Mach. Co., Atlanta, Ga.

Jackson & Church Co., Saginaw, Mich.  
♦ Jeffrey Mfg. Co., The, Columbus, O.  
Link-Belt Company, Chicago and Philadelphia.  
McGowan, John H., Co., Cincinnati, O.  
Reading Iron Co., Reading, Pa.  
Sculer, Geo. L., Mfg. Co., Buffalo, N. Y.  
Stearns-Roger Mfg. Co., The, Denver, Colo.  
Stroud, E. H., & Co., Chicago, Ill.  
The Plain Iron Works Co., Denver, Colo.  
Treadwell Co., M. H., Inc., New York (crystallizers).  
Vulcan Iron Works, Wilkesbarre, Pa.  
Walsh & Weidner Boiler Co., Chattanooga, Tenn. (crystallizers and defecators).  
Weller Mfg. Co., Chicago, Ill.

#### MACHINES, SWAGING.

♦ Atkins, E. C., & Co., Indianapolis, Ind.  
Bliss Co., E. W., Brooklyn, N. Y.  
Etna Machine Co., Toledo, O.  
Etna Mfg. Co., The, Toledo, O.  
Garrison Fdy. Co., A., Pittsburgh, Pa.  
Langeller Mfg. Co., Arlington, Cranston, R. I.  
Standard Machinery Co., Providence, R. I.  
Waterbury Farrell Fdy. & Mach. Co., Waterbury, Conn.

#### MACHINERY, TANNERY.

American Tool & Machine Co., Boston, Mass. (splitting machines).

Baker Mach. Co., Wilmington, Del.  
Barry & Zeckler, Lancaster, Pa.  
Caldwell Co., W. E., Louisville, Ky.  
Dane Mach. Co., Salem, Mass.  
Dennis & Co., John, Lowell, Mass.  
Dubois Iron Works, Dubois, Pa.  
Evans Sons, John, Philadelphia.  
Hide & Leather Working Machine Co., Milwaukee, Wis.  
Holmes Leather Working Machinery Co., Cambridge, Mass.

Horn & Bro., Wm. H., Philadelphia, Pa.  
Hollbrook Co., Milwaukee, Wis.  
Hutchinson Hide & Leather Mach. Co., Winchester, Mass.

Link-Belt Company, Chicago and Philadelphia.

Marrow Mach. Co., Salem, Mass.

Miller, Wm. P., Brooklyn, N. Y.

Myrick Machine Co., Olean, N. Y.

Munkwitz, Edw. H., Co., Milwaukee, Wis.

Sargent's, C. G., Sons, Graniteville, Mass.

Slocumb, F. F., & Co., Wilmington, Del.

Shapley & Wells, Binghamton, N. Y.

Smith's Sons Co., John E., Buffalo, N. Y.

Stehling Co., Chas. H., Milwaukee, Wis.

Turner Tanning Machinery Co., Peabody, Mass.

Woburn Mach. Co., Woburn, Mass.

#### MACHINES, TAPPING.

(See also "Attachments Tapping.")

Allen Machine Co., Cleveland, O.  
American Tool Works Co., Cincinnati, O.  
Anderson Die Machine Co., Bridgeport, Conn.  
Avey-Avey Drilling Machine Co., Covington, Ky.  
Barnes Drill Co., Rockford, Ill.  
Bicknell-Thomas Co., Greenfield, Mass.  
Burk Machine Tool Co., Conneaut, Ohio.  
Chain Belt Co., Milwaukee, Wis.  
Cincinnati-The Cincinnati Bickford Machine Tool Co., Cincinnati, O.

Clark, H. W., Co., Mattoon, Ill.

Elgin Tool Works, The, Elgin, Ill.

Errington F. A., New York, N. Y.

Fenns-Fenn Mfg. Co., Hartford, Conn.

Fosdick Machine Tool Co., Cincinnati, O.

Frontier Iron Works, Buffalo, N. Y.

Garvin Machine Co., The, New York, N. Y.

Geometric Tool Co., New Haven, Conn.

Gould & Eberhardt, Newark, N. J.

Grant Mfg. & Machine Co., Bridgeport, Conn.

Hammond-Hammond Mfg. Co., The, Cleveland, O.

Harris Engineering Co., Bridgeport, Conn.

Hubbell, Harvey, Inc., Bridgeport, Conn.

Independent Pneumatic Tool Co., Chicago, Ill.

It's a Baker-Baker Bros., Toledo, O.

Meriden Machine Tool Co., Meriden, Conn.

National-National Lathe Co., Cincinnati, O.

National Machinery Co., Tiffin, O.

Noble Machine Co., Ft. Wayne, Ind.

Pratt & Whitney Co., Hartford, Conn.

R. & S.-Rickert-Shafer Co., Erie, Pa.

Rickert-Shafer Co., Erie, Pa.

Rockford Drilling Machine Co., Rockford, Ill.

St. Louis-St. Louis Machine Tool Co., St. Louis, Mo.

San Francisco Engineering Co., San Francisco, Cal.

Sloan & Chace Mfg. Co., Ltd., Newark, N. J.

Standard Engineering Co., Ellwood City, Pa.

Stewart, S. A., & Co., Waltham, Mass.

Stow Flexible Shaft Co., Philadelphia, Pa.

Taylor-Shantz Co., Rochester, N. Y.

Taylor-Wilson-Taylor-Wilson Mfg. Co., McKees Rocks, Pa.

Temco-Temco Electric Motor Co., Leipsic, O. (portable, electric).

Turner Machine Co., Danbury, Conn.  
Tuttle-Paragon Gear Works, Taunton, Mass.  
Webster & Perks Tool Co., Springfield, O.  
Wells-F. E. Wells & Son Co., Greenfield, Mass.  
Wells-Greenfield Tap & Die Corp., Greenfield, Mass.  
Whitney Mfg. Co., Hartford, Conn.  
Woodstock-Peter Bros. Mfg. Co., Algonquin, Ill.  
Workwell-Workwell Engineering & Mfg. Co., Chicago, Ill.

#### MACHINES, TAPPING, FOR GAS AND WATER MAINS.

All Geared-Barnes Drill Co., Rockford, Ill.

Dayton-Light Geo., Dayton, O.

Eley's-Eley, Phillip, Bayonne, N. J.

♦ Eureka, Original Payne, Payne's Patent Old Style, New Eclipse, Daisy, Crow-Hays Mfg. Co., Erie, Pa.

Glauber Brass Mfg. Co., Cleveland, O.

Hall's Pat.-Walworth Mfg. Co., Boston, Mass.

Lennox Machine Co., Marshalltown, Ia.

Mueller-H. Mueller Mfg. Co., Decatur, Ill.

Pottstown Machine Co., Pottstown, Pa.

Saunders'-D. Saunders Sons, Inc., Yonkers, N. Y.

Smith-The A. P. Smith Mfg. Co., East Orange, Mass.

Water Works Equipment Co., New York.

#### MACHINES, TROWING.

(See also "Machinery, Woodworking.")

Greenlee Bros. Co., Rockford, Ill.

Oliver Machinery Co., Grand Rapids, Mich.

San Francisco Engineering Co., San Francisco, Cal.

Smith-H. B. Smith Machine Co., Smithville, N. J.

Stearns & Co., E. C., Syracuse, N. Y. (spoke).

#### MACHINERY, TESTING.

Harris-Harris Engineering Co., Bridgeport, Conn.

Thwing Instrument Co., Philadelphia, Pa.

#### MACHINES, FOR TESTING HARDNESS OF STEEL, BRASS, ETC.

Brinell-Scientific Materials Co., Pittsburgh, Pa.

Herbert, Alfred, Ltd., New York, N. Y.

Pittsburgh Instrument & Machine Co., Pittsburgh, Pa.

Rockwell Direct Reading-Wilson-Maeulen Co., New York, N. Y.

#### MACHINES, TESTING, IMPACT.

Pittsburgh Instrument & Machine Co., Pittsburgh, Pa.

#### MACHINERY, TESTING, TENSILE STRENGTH, ETC.

Olson, Tinius & Co., Philadelphia, Pa.

Riehle Bros. Testing Machine Co., Philadelphia, Pa.

(for testing iron, steel, cement, chain, timber, wire, rope, cloth, road materials).

Watson-Stillman Co., New York.

#### MACHINERY, TEXTILE PRINTING.

Barber-Colman Company, Rockford, Ill.

Eastwood, Benjamin, Co., Paterson, N. J.

Fox Chase Engineering Co., Inc., Philadelphia, Pa.

Rice, Barton & Fales Machine & Iron Co., Worcester, Mass.

#### MACHINES AND STEAMERS, TAWING, FIRE.

Aeroli-Aeroli Burner Co., Inc., Union Hill, N. J.

American-Trager Steam Copper Works, John, New York, N. Y.

Barnz, Otto, Co., Newark, N. J.

Bonzanz, Plumber's-Turner Brass Works, Sycamore, Ill.

Garrison Brass & Machine Co., New York.

Koven & Bro. L. O., New York, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

#### MACHINERY AND FIXTURES, THREAD MILLING.

American Thread Grinding Machine Co., New York.

Archdale Type-The Taft-Pierce Mfg. Co., Woonsocket, R. I.

Community Machine & Tool Wks., Inc., New York.

Gray Machine Tool Co., Inc., Buffalo, N. Y.

Lees-Bradner & Co., The, Cleveland, O.

Planetary-Hall Planetary Thread Milling Machine Co., Philadelphia, Pa.

Pratt & Whitney Co., Hartford, Conn.

Smalley-General Co., Bay City, Mich.

S. & S.-Schuchardt & Schutte, New York, N. Y.

Trundle-General Metals Co., Detroit, Mich.

Waltham Machine Works, Waltham, Mass.

#### MACHINES, THREAD ROLLING.

Blake & Johnson Co., Waterbury, Conn.

Bliss Co., E. W., Brooklyn, N. Y.

Manville Machine Co., E. J., Waterbury, Conn.

V. & O.-The V. & O. Press Co., Brooklyn, N. Y.

Waterbury Farrell Fdy. & Mach. Co., Waterbury, Conn.



**MACHINES, THREADING, STUD.**

Namco—National Acme Co., The, Cleveland, O.

**MACHINERY, TIE MILL.**

Challoner Co., Oshkosh, Wis.

**MACHINES, TIERING.**

Economy Engineering Co., Chicago, Ill.  
Lakewood Tier Lift Truck—Lakewood Engineering Co., Cleveland, O.  
Link-Belt Company, Chicago and Philadelphia.  
New York Revolving Portable Elevator Co., Jersey City, N. J.

**MACHINERY, TIN PLATE CLEANING.**

Anderson Foundry & Machine Works, Anderson, Ind.

**MACHINES, TIRE UPSETTING.**

Black Giant—Luther Mfg. Co., Inc., Olean, N. Y.  
Brooks Machine Co., Wichita, Kans.  
Buffalo Forge Co., Buffalo, N. Y.  
♦ Champion Blower & Forge Co., Lancaster, Pa.  
♦ Giant, Keystone and Sun—D. H. Potts, Lancaster, Pa.  
Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.  
Lourie Mfg. Co., Springfield, Ill.  
West Tire Setter Co., Rochester, N. Y.  
Western Chief—Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Williams, White & Co., Moline, Ill.

**MACHINES, TIRE WELDING.**

Heartley Machine, Variety Iron & Tool Works, Toledo, Ohio.  
Long & Allstatter Co., The, Hamilton, O.  
Williams, White & Co., Moline, Ill.

**MACHINERY, TOBACCO.**

American Machine & Fdy. Co., Brooklyn, N. Y.  
Blue Ball Machine Works, Blue Ball, Pa.  
Buckeye Iron & Brass Works, Dayton, O.  
Cardwell Machine Co., The, Richmond, Va.  
Daisy (cutter)—P. E. Shirk, Blue Ball, Pa.  
Little Giant—West Michigan Machine & Tool Co., Ltd., Grand Rapids, Mich. (Bunch Breakers and Packers.)  
McGowan—John H. McGowan Co., Cincinnati, O.  
Petersburg Iron Works, Petersburg, Va.  
Philadelphia Textile Machinery Co., Philadelphia, Pa.  
Richmond Metal Products Co., Inc., Richmond, Va.

**MACHINERY AND TOOLS, HOUSE MOVERS.**

Electric Wheel Co., Quincy, Ill.  
La Plant-Choate—Choate Mfg. Co., Cedar Rapids, Ia.

**MACHINES, TRENCHING.**

(See also "Machines, Ditching.")

Keystone—Keystone Driller Co., Beaver Falls, Pa.

**MACHINES, TUBE FILLING.**

Colton—Arthur Colton Co., Detroit, Mich.

**MACHINERY, TUBING, BRASS AND COPPER.**

Etna Machine Co., Toledo, Ohio.  
Standard Engineering Co., Ellwood City, Pa.  
Torrington Mfg. Co., The, Torrington, Conn.

**MACHINES, TUNNELING, FOR LAYING PIPE.**

(See also "Pushers, Pipe.")

**MACHINES, TURRET.**

(See also "Lathes, Turret.")

**MACHINES, VACUUM CLEANING.**

(See "Cleaners, Vacuum," and "Pumps, Vacuum.")

**MACHINES, VALVE HANDLE AND WOODEN RING.**

Pringle & Brodie Machinery Co., Chicago, Ill.

**MACHINES, VALVE INSERTING, IN WATER MAINS UNDER PRESSURE.**

Smith, A. P., Mfg. Co., Newark, N. J.

**MACHINE, VALVE MILLING.**

(See also "Machines, Cock Grinding.")

Warner & Swasey Co., The, Cleveland, O.

**MACHINES, VALVE RESEATING.**

(See also "Tools, Valve Facing.")

American Tool & Machine Co., Boston, Mass.  
AYA—Atkins, Young & Allen Co., Chicago, Ill.  
Bilt-Rite—Bilt-Rite Equipment Co., Worcester, Mass.

Black & Decker Mfg. Co., Baltimore, Md.  
Defiance Machine Works, The, Defiance, Ohio.  
Dexter—The Leavitt Machine Co., Orange, Mass.  
Ellis-Smith Mfg. Co., Inc., Buffalo, N. Y.  
Fosnacht—The National Auto Specialty Mfg. Co., Tama, Ia.  
Foster, Walter H., Co., The, New York.  
Lagonda—The Lagonda Co., Springfield, O.  
McKinnon—McKinnon Iron Works Co., Ashtabula, O.  
Milwaukee Cock Grinding Machine Co., Milwaukee, Wis.  
Nasco—National Auto Specialty Mfg. Co., Tama, Iowa.  
Pottstown Machine Co., Pottstown, Pa. (Tapping, seating and finishing.)  
Rooksby, E. J., & Co., Philadelphia, Pa.  
Smith Mfg. Co., A. P., Newark, N. J.  
Sterling—Adam A. Long, Rochester, N. Y.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Underwood, H. B., Corp., Philadelphia, Pa.  
Vulcan Engineering Sales Co., Chicago, Ill.  
Warner & Swasey Co., Cleveland, O.

**MACHINES, VENEER CUTTING.**

Bentel & Margedant Co., Hamilton, O.  
Berlin Machine Works, Beloit, Wis.  
Blakeslee—American-Blakeslee Mfg. Co., Birmingham, Ala.  
Capital Machine Works, Indianapolis, Ind.  
Coe Mfg. Co., Painesville, O.  
Merritt Mfg. Co., Lockport, N. Y.

**MACHINERY, VENEER DRYING.**

Coe Mfg. Co., The, Painesville, O.  
Merritt Mfg. Co., Lockport, N. Y.  
Proctor—Proctor & Schwartz, Inc., Philadelphia, Pa.

**MACHINES, VENEER REFUSE, GRINDING.**

M. & M.—Mitts & Merrill, Saginaw, Mich.

**MACHINES AND VISES, PICTURE FRAME.**

Rockford Mitre Box Co., Rockford, Ill.

**MACHINERY, WAGON AND CARRIAGE.**

Dauber-Bell Machine Co., Oshkosh, Wis.  
Defiance Machine Works, Defiance, Ohio.

**MACHINES, WARP, DRAWING & TYING.**

Barber-Colman Company, Rockford, Ill.

**MACHINERY, WASHER CUTTING.**

Southwark Foundry & Machine Co., Philadelphia, Pa.

**MACHINERY, WASTE WASHING.**

American Laundry Machinery Co., Cincinnati, O.  
Klauder—Weldon Dyeing Mach. Co., Amsterdam, N. Y.

**MACHINERY, WATER COOLING.**

Frick—Frick Co., Waynesboro, Pa.  
Triumph—Triumph Ice Machine Co., Cincinnati, O.

**MACHINERY, WAX PLANTS.**

Vogt Machine Co., Henry, Louisville, Ky.

**MACHINERY AND TOOLS, WELL DRILLING.**

American—The American Well Works, Aurora, Ill.  
American Well & Prospecting Co., Corsicana, Tex.  
Armstrong Mfg. Co., Waterloo, Iowa.  
Beaumont Iron Works, Beaumont, Tex.  
Boardman, Robt., Co., The, Oil City, Pa.  
Bradford Supply Co., Bradford, Pa.  
Clipper—Loomis Machine Co., Tiffin, O.  
Commercial Engine Co., Los Angeles, Cal.  
Cyclone—Sanderson Cyclone Drill Co., Orrville, O.  
Dempster—Dempster Mfg. Co., Beatrice, Neb.  
Empire—Leidecker Tool Co., Marietta, O.  
Fort Smith Well Drill Mfg. Co., Fort Smith, Ark.  
Ft. Worth—Axtell Co., Ft. Worth, Tex.  
Finlayson Tool Co., The, Tulsa, Okla.  
Howell—R. R. Howell & Co., Minneapolis, Minn.  
Ithaca—Williams Bros., Ithaca, N. Y.  
Keystone—Keystone Driller Co., Beaver Falls, Pa.  
♦ Knight Mfg. Co., The, Canton, O.  
Lone Star—Axtell Company, Ft. Worth, Tex.  
Lucey Mfg. Corp., New York, N. Y.  
Marietta—Leidecker Tool Co., Marietta, O.  
Monarch—Gus Pech Foundry & Mfg. Co., Le Mars, Iowa.  
Parkersburg Rig & Reel Co., Parkersburg, W. Va.  
Oil Well Supply Co., Pittsburgh, Pa.  
Oklahoma Iron Works, Tulsa, Okla.  
O'Leary, Arthur, & Son Co., Chicago, Ill.  
S. H.—Hughes Tool Co., Houston, Tex.  
Sinclair & Morrison Co., The, Lima, O.  
Sparta—Sparta Iron Works Co., Sparta, Wis.  
Specialty Device Co., The, Cincinnati, O.  
Star Drilling Machine Co., Akron, O.  
West Texas—San Antonio Machine & Supply Co., San Antonio, Texas.



**MACHINERY, WEIGHING, AUTOMATIC.**

Atlanta Utility Works, East Point, Ga.  
Automatic Weighing Machine Co., Newark, N. J.  
Improved Bond—National Packaging Machinery Co., Boston, Mass.  
National Scale Co., Chicopee Falls, Mass.  
Poidometer—Schaffer Engineering & Equipment Co., Pittsburgh, Pa.  
Richardson Scale Co., Passaic, N. J.  
Sturtevant Mill Co., Boston, Mass.

**MACHINERY, WHITE LEAD.**

Greenwald Co., I. & E., Cincinnati, O.

**MACHINES, WIPE JOINT.**

Corcoran—Allyne Brass Foundry Co., Detroit, Mich.

**MACHINERY, WIRE DRAWING, CABLING AND INSULATING.**

Larmuth—New England Wire Machine Co., New Haven, Conn.  
Sleeper & Hartley, Inc., Worcester, Mass.

**MACHINES, WIRE FORMING.**

Atlas Machine Co., The, Waterbury, Conn.  
Baird Machine Co., The, Bridgeport, Conn.  
Bates Machine & Tractor Co., Joliet, Ill.  
Bliss, E. W., Co., Brooklyn, N. Y.  
Coulter & McKenzie Machine Co., Bridgeport, Conn.  
Klotz Machine Co., Sandusky, O.  
Langeller Mfg. Co., Arlington, Cranston, R. I.  
National—National Machinery Co., Tiffin, O.  
Nilson, A. H., Machine Co., The, Bridgeport, Conn.  
Pulte-Korreck Machine Co., Grand Rapids, Mich.  
Quickworth—H. Collier Smith, Detroit, Mich.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Waterbury Machine Co., Waterbury, Conn.  
Wells, Frank L., Co., Kenosha, Wis. (collers).

**MACHINERY, WIRE MATTRESS AND SPRING BED.**

Wells, Frank L., Co., Kenosha, Wis.

**MACHINERY AND EQUIPMENT, WIRE MILL.**

Cleveland Crane & Engineering Co., Wickliffe, O.  
Morgan Construction Co., Worcester, Mass.

**MACHINERY, WIRE NAIL.**

National Machinery Co., Tiffin, O.  
Perkins, H. K., Co., Taunton, Mass.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
Universal—Sleeper & Hartley, Inc., Worcester, Mass.

**MACHINES, WIRE RING.**

Toledo Machine & Tool Co., Toledo, Ohio.

**MACHINERY, WIRE STRAIGHTENING AND CUTTING.**

Hartley Machine, Variety Iron & Tool Works, Toledo, O.  
Sleeper & Hartley, Inc., Worcester, Mass.

**MACHINERY, WOODEN HANDLE.**

Defiance Machine Works, The, Defiance, O.

**MACHINERY, WOOD SCREW.**

Cook Co., Asa S., Hartford, Conn.

**MACHINERY, WOOD WHEEL.**

Defiance Machine Works, Defiance, Ohio.

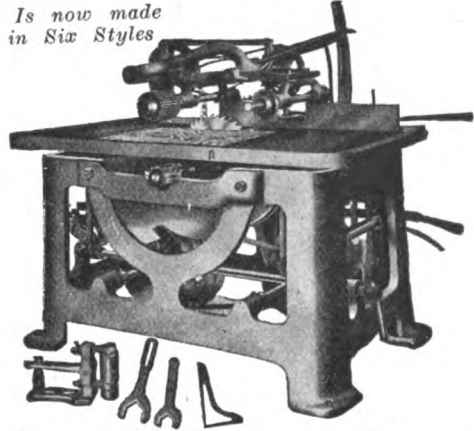
**MACHINERY, WOODWORKING.**

(See also "Woodworkers', Variety.")

Advance-Van Wert—New Advance Machinery Co., Van Wert, O.  
Advance, Toledo—Alexander Dodds Co., Grand Rapids, Mich.  
American—American Saw Mill Machinery Co., Hackensack, N. J.  
American Woodworking Machinery Co., Rochester, N. Y.  
Andrew & Co., M. L., Cincinnati, O. (boring machine).  
Austin & Eddy, Boston, Mass. (pioneer molding sander).  
Badger State Machinery Works, Beloit, Wis.  
Bancroft & Barnard Co., Gardner, Mass. (bending mach.).  
Billstrom, Nels J., Rockford, Ill. (glue clamp carrier).  
Black Bros. Co., Mendota, Ill. (clamp holding, veneer and glue room, moulding, mortising, sandpapering).  
Buffalo Forge Co., Buffalo, N. Y.  
Buss Machine Works, The, Holland, Mich. (planers, shapers, saw benches, cut off saw traps).  
Carey, W. W., Co., Lowell, Mass.  
Chapmans, T. M., Sons Co., Old Town, Me. (bolters & box machinery).

**The Hoosier Self-Feed Rip Saw**

Is now made  
in Six Styles



You will find one of these styles designed especially for your work—

- No. 1. The well known standard, rips to 6x17 inches, resaws to 6 inches; adaptable to single, gang or bevel ripping; feed will pull 6 saws through 1-inch stock.....\$250
- No. 2. The standard machine, with one fixed and one movable saw, the latter adjustable while running for the full width of collar space, 8½ inches.....\$275
- No. 3. Known as the Hoosier Cleat Machine, because especially designed for cleats and short gang ripping.....\$275
- No. 4. New wide frame, practically same as No. 1, except has 14-inch collar space and rips to 23 inches.....\$300
- No. 5. Like No. 4, but with movable saw traveling the full width of the 14-inch collar space.....\$325
- No. 6. The No. 4 with extension bracket at outer end of mandrel; rips to 29 inches.....\$375

The reliability and efficiency of Hoosier Rip Saws are known to woodworkers everywhere. They are made in only one grade—the highest. The six styles of the one grade are made to meet every requirement.

Which one can you use best?

**THE SINKER-DAVIS COMPANY, Indianapolis, Ind.**  
Band and Circular Saw Mills—Saw Mill Machinery

Chase Turbine Mfg. Co., Orange, Mass. (lock corner and wire bound box and crate machinery).  
Chattanooga Machinery Co., Chattanooga, Tenn. (Insulator pin, cross arm and conduit boring).  
Colladay Machine Works, Philadelphia, Pa. (jointers, shapers, lathes, boring, band, scroll and swing saws, saw benches, molders, tenoners).  
Conrad, A. G., Chicago (saw gummer, sharpener, jointer).  
Cordesman—The Cordesman-Rechtin Co., Cincinnati, O. (for all purposes, new and pre-used).  
Corinth Machinery Co., Corinth, Miss.  
✧ Crescent—The Crescent Machine Co., Leetonia, O. (portable variety woodworkers, woodworking planers, swing cut-off saws, grinders' disk, boring machines, matchers, band saws, saw tables, jointers).  
Curtis Machine Corp., Jamestown, N. Y. (sanding, polishing, rubbing and "Lochman" carving machine).  
Curtis Mfg. Co., St. Louis, Mo.  
Dauber—Bell Machine Co., The, Oshkosh, Wis.  
Defiance Machine Works, Defiance, O.  
Defiance Machine Works, Defiance, O. (automobile wheel and handle machine, gun stock lathes and carriage, handle, chain, table, hoop, spool, wooden disk and wood pulley mach'y).  
De Loach Mill Mfg. Co., Chattanooga, Tenn.  
Dodds—Alexander Dodds Co., Grand Rapids, Mich. (carving, dovetailing, saw tables, swing, cut-off saws).  
Empire Machine Works, Mt. Morris, N. Y. (spoke, wheel and handle machine, gun stock lathes and sanders).  
Eureka—Mitts & Merrill, Saginaw, Mich. (scarfers, band saws).  
Fischer Machine Works, Chicago, Ill.  
Fox Machine Co., Grand Rapids, Mich.  
Garland Co., The M., Bay City, Mich.  
Goodspeed Machine Co., Winchendon, Mass.  
Grammes, L. F., & Sons, Allentown, Pa.  
Greaves-Klusman Tool Co., Cincinnati, O.  
Greenlee—Greenlee Bros. & Co., Rockford, Ill. (boring, mortising, sawing lathes, hollow chisels).  
Greenwood, Chester, & Co., Farmington, Me.  
Hall & Brown Woodworking Machine Co., St. Louis, Mo. (boring, matching, printing, sanding, grinding, jointing, mortising, and dowel machines, lathes, planers, moulders, tenoners and saws).  
Heath Machine Co., W. A., Lestershire, N. Y. (sanders).

Hermance Machine Co., Williamsport, Pa. (dado, planers, matchers, tenoners, moulders, sanders, mortisers, sash stickers, door and sash clamps, self-feed rip saws, cut off and combination saws.)  
 Hill-Curtis Co., Kalamazoo, Mich.  
 Holmes Machinery Co., E. & B., Buffalo, N. Y. (cut-off saws).  
 ♦ **Hoosier—The Sinker-Davis Co.**, Indianapolis, Ind.  
 Horton Machine Works, Elmira, N. Y.  
 Ingersoll-Rand Co., New York, N. Y. (boring).  
 Jenkins-Falls, Jenkins Hayes—Jenkins Machine Co., Sheboygan, Wis. (rip saws, tenoners, glue jointers, veneer jointers, cut-off saws.)  
 Jones—Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Kelly Router—Kelly Electric Machine Co., Buffalo, N. Y. (Kelly floor machine for grinding, sanding, waxing and polishing floors).  
 Kidder, R. E., Co., Worcester, Mass. (saw bench, boring).  
 Lane Mfg. Co., Montpelier, Vt.  
 Lightning—Fay, J. A., & Eagan Co., Cincinnati, O.  
 Little Giant—Fisher & Davis Mfg. Co., St. Louis, Mo. (planers, matchers, molders).  
 McDonough Mfg. Co., Eau Claire, Wis. (hand resaws).  
 ♦ Machinery Company of America, Big Rapids, Mich.  
 Manco—Mann Corporation, Kankakee, Ill. (cutting-off).  
 Marlboro Machine Co., Marlboro, N. H.  
 Mattison Machine Works, Rockford, Ill. (turning lathes, belt sanders, dado heads, varnish rubbing, molders).  
 Merritt Standard—Merritt Mfg. Co., Lockport, N. Y.  
 Money-Maker—W. S. Hawker Mfg. Co., Dayton, O. (rod and dowel, dowel cutting and pointing and handle turning machines).  
 Monroe Machinery Co., Monroe, Mich.  
 Muskegon Machine Co., Muskegon, Mich.  
 Nash, J. M., Milwaukee, Wis. (sanders).  
 National Woodworking Machinery Co., Dover, N. H.  
 New Britain—New Britain Machinery Co., The, New Britain, Conn. (mortising, dadoing, setting, filing machines, cowl saw guides, clamps, etc.).  
 Newman Machine Co., Greensboro, N. C. (flooring machines, molders, planers, matchers, surfacers, hand planers, door and blind clamps, tenoners, cut-off saws, re-saws, rip saws, gang edgers, swing saws, lath machinery).  
 Noble Machine Co., Ft. Wayne, Ind.  
 O & W—Olney & Warrin, New York, N. Y.  
 Oakley & Jansen Machinery Co., Parkersburg, W. Va.  
 Ober Mfg. Co., Chagrin Falls, O. (lathes, saws and sanders).  
 Ohlen & Sons Mfg. Co., The James, Columbus, O.  
 Oliver Machinery Co., Grand Rapids, Mich. (molding, mortising, tenoning, turning, jointing, planing, trimming, sanding, sawing, manual training machinery and tools).  
 Orum, Morris L., Philadelphia, Pa. (special).  
 Parks—Parks Ball Bearing Machine Co., Cincinnati, O.  
 Peerless Surface Machine Co., Newark, N. J.  
 Perkins—Perkins & Co., Grand Rapids, Mich.  
 Phillips Line—Atlas Mfg. Co., Orlando, Fla. (Window frame).  
 Phoenix Mfg. Co., Eau Claire, Wis.  
 Porter—C. O. Porter Machinery Co., Grand Rapids, Mich.  
 Power, L. & Co., Philadelphia, Pa.  
 Pringle & Brodie Machinery Co., Chicago, Ill. (lathes, boring, sanding and polishing machines).  
 Prybil—P. Prybil Machine Co., New York (band saws, boring machines, jig saws, circular saws, cross cut gauges, saw guards, moulding machines, sanders).  
 Redin, Ekstrom & Co., Rockford, Ill. (sanding drums).  
 Reynolds Machine & Pattern Co., Moline, Ill. (screw-driving mach.)  
 Root Co., B. M., York, Pa. (boring machine and saw tables).  
 Sater, Marsden & Whittemore Co., Beloit, Wis.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
 Sidney Machine Tool Co., Sidney, O. (band saws, jointers, planers, shapers, turning lathes, borers, universal woodworkers).  
 Silver Mfg. Co., Salem, O. (jointers, swing saws, saws, saw tables).  
 Simplex—The Kent Mfg. Co., Faribault, Minn. (sanders).  
 Smith Electric Tool Co., Cincinnati, Ohio.  
 Smith Machine Co., H. B., Smithville, N. J. (band saws, planers, saw benches, molding, mortising, sanding and tenoning machines).  
 Springfield—Shawver Co., Springfield, O.  
 Star—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Stetson-Ross Machine Wks., Seattle, Wash. (matchers, surfacers, sizers).  
 Superior—Jones Superior Machine Co., Chicago, Ill. (shapers, jointers, planers, boring machines, band saws, combination saws, swing saws).  
 Superior Line—The Jansen-Peterson, Cleveland, O.  
 Tannewitz Works, The, Grand Rapids, Mich. (crescent dowel mach.).  
 The Shawver Co., Springfield, O. (fluting and twisting machine, oval and circle cutters, disc sanders).  
 Tidey, Marcus B., Newark, N. J.

Tidey, Wesley, Newark, N. J.  
 Towsley—Towsley, John T., Mfg. Co., Cincinnati, O.  
 Trevor Mfg. Co., Lockport, N. Y.  
 United States Machine Co., Williamsport, Pa.  
 V. C.—Valley City Machine Works, Grand Rapids, Mich.  
 Victory Foundry & Machine Co., Inc., Buffalo, N. Y. (Planers, matchers, moulders, surfacers, jointers, lath mills; band, scroll, rip, swing and cut-off saws, saw benches, tenoners and mortisers).  
 Wallace, J. D., & Co., Chicago, Ill.  
 West Side—West Side Iron Wks., Grand Rapids, Mich.  
 Whitney, Baxter D., & Son, Winchendon, Mass. (saw benches).  
 Woods Engineering Co., The, Alliance, O. (rip saw).  
 Woods Machine Co., S. A., Boston, Mass. (planers, matchers, moulders, surfacers, flooring machines, sizers, mortisers, borers, saws, grinders).  
 Woodworkers Tool Works, Chicago, Ill. (saws, knives, etc.).  
 Wysong & Miles Co., Greensboro, N. C. (mortisers, sand belt machines, band saws, shapers, dovetailers, chair and furniture machinery).  
 Yates, P. B., Machine Co., Beloit, Wis.  
 Yerkes & Finan Woodworking Machine Co., St. Louis.

#### MACHINES, WOOD BORING, POWER.

(See "Machines, Boring and Turning," and "Machinery, Woodworking.")

♦ Crescent Machine Co., The, Leontonia, O.  
 Ingersoll-Rand Co., New York, N. Y.

#### MACHINES, WOOD BORING, POWER, PORTABLE.

American Saw Mill Machinery Co., Hackettstown, N. J.  
 Helwig—Helwig Mfg. Co., St. Paul, Minn.

#### MACHINES, WOOD SPLITTING.

American Saw Mill Machinery Co., Hackettstown, N. J.  
 Glascock Stove & Mfg. Co., Greensboro, N. C.  
 Hill Co., Wm. E., Kalamazoo, Mich.  
 Jones—Huntsville Foundry & Machine Works, Huntsville, Ala.

#### MAGAZINES, POWDER.

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., de Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.  
 Littleford Bros., Cincinnati, O.

#### MAGAZINES FOR SCREW MACHINES.

Cone Automatic Machine Co., Inc., Windsor, Vt.

#### MAGNESITE AND CHEROKEE ORE.

Harbison-Walker Refractories Co., Pittsburgh, Pa.

#### MAGNESIUM, BARS AND POWDER.

Aluminum Company of America, Pittsburgh, Pa.

#### MAGNETIC DRUMS, PULLEYS, CONCENTRATORS, SEPARATORS AND SPOUTS.

Dings Magnetic Separator Co., Milwaukee, Wis.

#### MAGNETS, LIFTING, SEPARATING AND SAFETY.

Bretz, J. S., Co., New York, N. Y.  
 Cutler-Hammer Clutch Co., Milwaukee, Wis.  
 Dings—Dings Magnetic Separator Co., Milwaukee, Wis.  
 Electric Controller & Mfg. Co., Cleveland, O.  
 Magnetic Mfg. Co., Milwaukee, Wis.  
 Ohio Electric & Controller Co., Cleveland, Ohio.

#### MAILING LISTS.

Crawford Publishing Co., The, Chicago, Ill.  
 Goddard, W. N., Boston, Mass.

#### MALLETS, RAWHIDE.

Beaudry, T. Joseph & Son, Marlboro, Mass.  
 Brockton Mallet Co., Brockton, Mass.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Holbrook Rawhide Co., Providence, R. I.  
 Obermayer, S. Co., The, Cincinnati, Ohio.

#### MALLETS, RUBBER HEAD.

♦ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Continental Rubber Works, Erie, Pa.  
 Diamond Rubber Co., Inc., The, Akron, O.  
 ♦ Goodrich—The B. F. Goodrich Co., Akron, O.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 U. & H. Master Magneto—J. S. Bretz Co., New York.  
 ♦ United States Rubber Co., New York.

#### MALLETS, WOOD.

Bernz Co., Otto, Newark, N. J.  
 Estes, E. B., & Sons, New York, N. Y.

Newton Falls Mfg. Co., The, Newtons Falls, O.  
 Novelty Turning Co., Norway, Me.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Stanley Rule & Level Co., New Britain, Conn.  
 Union Hardware Co., Torrington, Conn.  
 Wilcox, Crittenden & Co., Middletown, Conn.

**MANDRELS, LATHES, EXPANDING.**

Advance Tool Co., Cincinnati, O.  
 Alert Tool Co., Philadelphia, Pa. (roller grip).  
 American Pneumatic Chuck Co., Chicago, Ill.  
 Brown & Sharpe Mfg. Co., Providence R. I.  
 Champion—Western Tool & Mfg. Co., Springfield, O.  
 Chapin-Skelton Corp., Syracuse, N. Y.  
 ♦ Cleveland Twist Drill Co., The, Cleveland, O.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 Hannifin Mfg. Co., Chicago, Ill.  
 Jaeger Roll Grip—Sword Mfg. Co., Inc., New London, Conn.  
 Jersey City Machine Co., Jersey City, N. J.  
 Le Count—W. G. Le Count Tool Works, South Norwalk, Conn.  
 Lutz—Lutz Company, Inc., Philadelphia, Pa.  
 McCrosky—McCrosky Tool Corp., Meadville, Pa.  
 M. E. C.—Manufacturers' Equipment Co., Chicago, Ill.  
 Nicholson—W. H. Nicholson & Co., Wilkesbarre, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 ♦ Standard Tool Co., Cleveland, O.  
 Up-To-Date Tool Co., S. Boston, Mass.

**MANDRELS, SAW.**

American—American Saw Mill Machinery Co., Hackensettown, N. J.  
 ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Atlas Machine Co., Nashville, Tenn.  
 Bental & Margendant, Hamilton, O.  
 Cleveland Machinery & Supply Co., Cleveland, Tenn.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Crown—Clizbe Bros. Mfg. Co., Plymouth, Ind.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Emerson, Smith & Co., Beaver Falls, Pa.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Hill-Curtis Co., Kalamazoo, Mich.  
 Jones—Huntsville Foundry & Machine Works, Huntsville, Ala.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Ober Mfg. Co., The, Chagrin Falls, O.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Oliver Machinery Co., Grand Rapids, Mich.  
 ♦ Partridge—E. O. Partridge, Chicago, Ill.  
 Smith & Co., Emerson, Beaver Falls, Pa.  
 ♦ Southern—Southern Saw Works, Atlanta, Ga.  
 ♦ W. B.—Whitman & Barnes Mfg. Co., Akron, O.  
 Wheland—The Wheland Co., Chattanooga, Tenn.

**MANDRELS, STEEL.**

Whitman & Barnes Mfg. Co., Akron, O.

**MANDRELS, TINNERS.**

(See also "Mach'y and Tools, Sheet Metal Working.")

Adams—Adams Co., The, Dubuque, Ia.  
 Little Giant—B. E. Noyes & Co., Greenfield, Mass.  
 Peck, Stow & Wilcox Co., The, Southington, Conn.

**MANGERS & RAY RACKS, IRON.**

Sanitary Company of America, Linfield, Pa.

**MANHOLES AND HANDHOLES, BOILER AND TANK.**

Bruce-Macbeth Engine Co., The, Cleveland, O.  
 Glasgow Iron Co., Philadelphia, Pa.  
 Ideal—Milwaukee Boiler Co., Milwaukee, Wis.  
 Lukens Iron & Steel Co., Coatesville, Pa.  
 Midvale Steel & Ordnance Co., Philadelphia, Pa.  
 Milwaukee Boiler Mfg. Co., The, Milwaukee, Wis.  
 Scully Steel & Iron Co., Chicago, Ill.  
 Valley Machine Co., Parkersburg, W. Va.

**MANIFOLDS, STEAM.**

Cornell & Underhill, New York, N. Y.  
 Exeter Machine Works, Exeter, N. H.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Limbert & Co., Geo. B., Chicago, Ill.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Walworth Mfg. Co., Boston, Mass.

**MANOMETERS.**

Gebhardt, Republic—Republic Flow Meters Co., Chicago, Ill.  
 Simplex Valve & Meter Co., Philadelphia, Pa.

**MARBLE DUST.**

Nelson, N. O., Marble Co., Edwardsville, Ill.

**MARBLE, FOR PLUMBING, INTERIOR AND ELECTRICAL WORK.**

Butler, Phillip H., & Son Co., Somerville, Mass.

Davis Slate & Mfg. Co., Chicago, Ill.  
 Nelson Marble Co., N. O., Edwardsville, Ill.  
 Rutland Marble Mfg. Co., Rutland, Vt.  
 Standard Plumbing Supply Co., New York, N. Y.  
 Union Soapstone Co., Boston, Mass.  
 Vermont Marble Co., Proctor, Vt.  
 Wolff Mfg. Co., Chicago, Ill.

**MARKERS, PIPE TAG.**

Pannier Bros. Stamp Co., Inc., Pittsburgh, Pa.

**MARKERS, SEWER.**

♦ Hays Mfg. Co., Erie, Pa.

**MASKS, GAS.**

Absorbets—The Protecto Safety Appliance Co., Newark, N. J.  
 Atmos—American Atmos Corp., Pittsburgh, Pa.  
 Burrell—Mine Safety Appliances Co., Pittsburgh, Pa.  
 Double Absorbite—The Protecto Safety Appliance Co., Newark, N. J.  
 Hygeia—Hygeia Respirator Co., Inc., New York, N. Y.  
 Multi-Metal Separating Screen Co., New York, N. Y.  
 Puretha—H. N. Elmer, Chicago, Ill.

**MATS, RADIO.**

♦ Walworth Mfg. Co., Boston, Mass.

**MATCHERS, LUMBER.**

(See "Machinery, Woodworking.")

American—American Saw Mill Machinery Co., Hackensettown, N. J.  
 Chase Turbine Mfg. Co., Orange, Mass.  
 Holmes, E. & B., Machinery Co., Buffalo, N. Y.  
 ♦ Knight Mfg. Co., The, Canton, O.  
 Lane Mfg. Co., Montpelier, Vt.  
 Woods Machine Co., S. A., Boston, Mass.  
 Yates, P. B., Machine Co., Beloit, Wis.

**MATS, BATH, RUBBER.**

Cantslip Mfg. Co., The, New York, N. Y.  
 ♦ Goodrich—The B. F. Goodrich Co., Akron, O.  
 ♦ Meruco—The Mechanical Rubber Co., Cleveland, O.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 Silver & Co., Brooklyn, N. Y.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.

**MATS, BLASTING.**

Shannon, J. Jacob & Co., Philadelphia, Pa.

**MATS, CORK, FOR BATHROOMS.**

Armstrong Cork Co., Pittsburgh, Pa.

**MATS, LEATHER.**

♦ Page Belting Co., Concord, N. H.  
 National—United Mat Mfg. Co., Roselle Park, N. J.

**MATS AND MATTING, RUBBER.**

♦ Automobile—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Boston Belting Corp., Boston, Mass.  
 ♦ Buckley Rubber Co., J. W., New York, N. Y.  
 ♦ Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
 ♦ Dundee, Nahma, N. P. M.—New York Belting & Packing Co., New York, N. Y.  
 Double Service Packing Co., Philadelphia, Pa.  
 Diamond Rubber Co., Inc., Akron, O. Trade names, Gulf, Titan, Sphinx, and Clipper.  
 Dominion Asbestos & Rubber Corp., New York, N. Y.  
 Essex—Essex Rubber Co., Inc., Trenton, N. J.  
 Flex-Braid—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Goodrich Rubber Co., The B. F., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Hewitt Rubber Co., Buffalo, N. Y.  
 Hudson—Hudson Mechanical Rubber Co., New York, N. Y.  
 Johnson Co., The, Henry, Jersey City, N. J.  
 Kansas City Rubber & Belting Co., Kansas City, Mo.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 ♦ Lenox—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Maquire Rubber Co., New York, N. Y.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 ♦ Nybnoh, Pyramid—New York Belting & Packing Co., New York, N. Y.  
 ♦ Pinnacle—Goodrich Rubber Co., B. F., Akron, O.  
 Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Pitcher—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 ♦ Pyramid—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Salisbury & Co., Inc., W. H., Chicago, Ill.  
 Tiger—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 United Mat Mfg. Co., Roselle Park, N. J.

- ♦ United States Rubber Co., Mechanical Goods Div., New York, N. Y.
- ♦ Voorhees Rubber Mfg. Co., Jersey City, N. J.
- Wilbow—Williams-Bowman Rubber Co., The, Chicago, Ill.

#### MATS, SINK AND DRAINBOARD.

- Cantslip Mfg. Co., The, New York, N. Y.
- Mott Iron Works, The J. L., Trenton, N. J.
- ♦ New York Belting & Packing Co., New York, N. Y.
- Phila. Sheet Metal & Wood Works, Philadelphia (wood).
- Schwab Bros. Co., New York, N. Y. (wood).
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- Vall Rubber Co., Chicago, Ill.
- Wolverine Sheet Metal & Wood Works, Philadelphia, Pa.

#### MATS, STEEL.

- Cary Mfg. Co., Brooklyn, N. Y.
- Cyclone Red Tag—Cyclone Fence Co., Waukegan, Ill.
- Hercules—La Porte Mat & Mfg. Co., La Porte, Ind.
- Pratt, Wm. E. Mfg. Co., Chicago, Ill. (wire).
- United Mat Mfg. Co., Roselle Park, N. J.
- Wear Proof—Wear Proof Mat Co., Chicago, Ill. (steel and felt).

#### MATS, WOOD.

- Cantslip Bathtub Appliance Co., New York, N. Y.
- Padgett—Wooden Ventilator Co., East Palestine, O.

#### MAULS AND MALLETS, RAWHIDE.

- Colonial Leather Co., Chicago, Ill.
- Sperry, D. R. & Co., Batavia, Ill.

#### MAULS, STEEL AND IRON.

- American Scale Co., Kansas City, Mo.
- Indiana Foundry Co., Indiana, Pa.
- Verona Tool Works, Pittsburgh, Pa.
- Warren Tool & Forge Co., The, Warren, O.

#### MAULS, WOODEN.

- Estes, E. B. & Sons, New York, N. Y.
- Hubbard & Co., Pittsburgh, Pa.
- Iron City Star—Iron City Tool Works, Pittsburgh, Pa.
- Novelty Turning Co., Norway, Me.
- Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.
- Pollard, Joseph G., Co., Inc., Brooklyn, N. Y.
- Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### MEASURES, COPPER.

- Aldrich Mfg. Co., Buffalo, N. Y.
- National Marine Lamp Co., New York, N. Y.

#### MEASURES, FIBRE.

- Fibrotta—Cordley & Hayes, New York, N. Y.

#### MEASURES, SELF-REGISTERING PIPE LINE.

- Bowser & Co., S. F., Ft. Wayne, Ind.

#### MEASURES, TESTING, AUTOMATIC.

- Dover Stamping & Mfg. Co., Cambridge, Mass.

#### MEASURES AND FUNNELS, OIL, FLEXIBLE SPOUT.

- Mooers-Wright Co., New York City.

#### MENDERS, HOSE AND PIPE.

- Allen Fire Department Supply Co., The, Providence.
- American Brass & Copper Co., The, New York, N. Y.
- American Foundry & Mfg. Co., St. Louis, Mo. (brass and iron).
- ♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Callahan Co., The, Corneliuss, Boston, Mass.
- Cooper—Cooper Hose Mender Co., Providence, R. I.
- Cooper, Neely—S. F. Hayward & Co., New York, N. Y.
- Dallett—Thos. H. Dallett Co., Philadelphia, Pa.
- Eclipse—John C. Kupferle Foundry Co., St. Louis.
- Elkhart Brass Mfg. Co., Elkhart, Ind.
- Farnan Brass Works, Cleveland, O.
- Fries & Co., Buffalo, N. Y.
- Glauber Brass Mfg. Co., Cleveland, O.
- Hayward & Co., S. F., New York, N. Y.
- Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.
- Monarch—Monarch Hardware Co., Buffalo, N. Y.
- Nob-Lok—C. A. Claflin Co., Boston, Mass.
- Peck Bros. & Co., The, New Haven, Conn.
- Perfect Clinching—L. R. Nelson, Peoria, Ill.
- Pratt, Wm. E. Mfg. Co., Chicago, Ill.
- Samson—The Cassaday-Fairbank Mfg. Co., Chicago.
- Schlenger Bros. Co., Chicago, Ill.
- Seattle Brass Co., Seattle, Wash.
- ♦ Sherman Mfg. Co., E. E., Battle Creek, Mich. (iron and brass).
- Stulp—Fred J. Stulp, Muskegon, Mich.
- ♦ Walworth Mfg. Co., Boston, Mass.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.
- Yankee—Boston Woven Hose & Rubber Co., Cambridge, Mass.

#### MENDERS, METAL, FIRELESS

- New Metal—New Metal Products Corp., Binghamton, N. Y.

#### METAL, BEARING, ANTI-FRICTION AND BABBITT.

- Adamant—Magnolia Metal Co., New York, N. Y.
- Advance—United States Reduction Co., Chicago, Ill.
- Advancer—Vandervoort Hdw. Co., Lansing, Mich.
- Ajax Bull—The Ajax Metal Co., Philadelphia, Pa.
- Albuquerque Foundry & Machine Works, Albuquerque, N. M.
- Allan—A. Allan & Son, Harrison, N. J.
- Alumaloy—Premium Metal & Packing Co., Inc., Wilkesburg, Pa.
- American Crucible Products Co., Elyria, O.
- American Smelters Securities Co., San Francisco, Cal.
- American Smelting & Refining Co., The, Cincinnati, O.
- American Zinc, Lead & Smelting Co., Boston, Mass.
- Ampco Bronze—American Metal Products Co., Milwaukee, Wis.
- Anti-Friction—Thomas Wildes' Son, Inc., New York, N. Y.
- Anvil—Continental Metal Co., Brooklyn, N. Y.
- Armature—Leddell Metals Co., Inc., Long Island City, N. Y.
- Armature—Union Smelting & Refining Co., Newark, N. J.
- Arm-Hammer—Continental Metal Co., Brooklyn, N. Y.
- Atlas—Pacific Metal Works, San Francisco, Cal.
- Aurora Metal Co., Aurora, Ill.
- Badger—Badger Gas & Gasoline Engine Co., Kansas City, Mo.
- Bear Brand Babbitt—I. Shonberg, Inc., Brooklyn, N. Y.
- Bee Anti-Friction—Leddell Metals Co., Inc., Long Island City, N. Y.
- Best—Marks Lissberger & Son, Inc., Long Island City, N. Y.
- Betarbest—Ohio Metal Co., Columbus, O.
- Birkenstein, S. & Sons, Inc., Chicago, Ill.
- Blatchford—Blatchford Co., E. W., Chicago, Ill.
- B. M. Co.—Bronze Metal Co., New York, N. Y.
- Breuer, C. R., Smelting & Refining, Cincinnati, O.
- Bruce & Cook, New York, N. Y.
- Budd Grate Company, Philadelphia, Pa.
- Bull—The Ajax Metal Co., Philadelphia, Pa.
- Cadmans Aluminum—A. W. Cadman Mfg. Co., Pittsburgh, Pa.
- Charleston Lead Works, The, Charleston, S. C.
- Chicago Bearing Metal Co., Chicago, Ill.
- Climax—Pacific Metal Works, San Francisco, Cal.
- Clover Leaf—E. A. Williams & Son, Inc., Jersey City, N. J.
- Codd Tank & Specialty Co., Baltimore, Md.
- Colorado Lead Works Co., Denver, Colo.
- Columbia Smelting & Refining Co., New York, N. Y.
- Coploy—Michigan Smelting & Refining Co., Detroit, Mich.
- Cypress—Brady Brass Co., Jersey City, N. J.
- Dambabbitt—The Armstrong Co., Detroit, Mich. (plastic babbitt putty).
- Dixie—Smith-Courtney Co., Richmond, Va.
- ♦ Dodge—Dodge Sales & Engineering Co., Mishawaka, Ind.
- Duro—The Muzzy Lyon Co., Ltd., Detroit, Mich.
- Dutch Boy—National Lead Co., New York, N. Y.
- Dynamotor—Continental Metal Co., Brooklyn, N. Y.
- Eagle-Picher Lead Co., Cincinnati, O.
- Eagle Smelting & Refining Works, New York, N. Y.
- Eclipse—Pacific Metal Works, San Francisco, Cal.
- Edna Brass Mfg. Co., The, Cincinnati, O.
- Empire Metal Co., Syracuse, N. Y.
- Empire—John Finn Metal Works, Seattle, Wash.
- Eternal—Stratton & Bragg Co., Petersburg, Va.
- Everlasting—Marks Lissberger & Son, Inc., Long Island City, N. Y.
- Excelsior—Thos. Wildes' Son, Inc., New York, N. Y.
- Extra Fine—Chadwick-Boston Lead Co., Boston, Mass.
- F. & H.—Franz-Holbrook Bronze Co., Newark, N. J.
- Finns Armature Metal—John Finn Metal Works, San Francisco, Calif.
- First Premium—Canfield Sons Co., M. C., Newark, N. J.
- Foss Graphite, Silver Star—W. J. Foss Co., Springfield, Mass.
- ♦ Frictionless—Frictionless Metal Co., Chattanooga, Tenn.
- Gardiner Metal Co., Chicago, Ill.
- Garratt & Co., W. T., San Francisco, Cal.
- Genesee Metal Co., Rochester, N. Y.
- ♦ Genuine Aluminum—Dodge Sales & Engineering Co., Mishawaka, Ind.
- Genuine—Marks Lissberger & Son, Inc., Long Island City, N. Y.
- ♦ Genuine Sovereign, Silverline, AA 1 Copper, Glacier—Glacier Metal Co., Richmond, Va.
- ♦ Genuine Tinalog—Michigan Smelting & Refining Co., Detroit, Mich.
- A. Gilbert & Sons Brass Foundry Co., St. Louis, Mo.
- Trade Names—Gilbert Babbitt and Anti-friction Metal in following grades: "C" Nickel Babbitt; "D" Nickel Babbitt; "E" Babbitt; "F" Copper Hardened Metal; "G" Gas Engine Babbitt; "H" Rolling Mill Metal; "I" Standard Anti-friction; "J" Standard Anti-friction; "K" Flour Mill Jour-

nals; "L" Car Box Lining Metal; No. 1, No. 2, No. 3 and No. 4 Babbitt Metal; Original Genuine Babbitt and Special Genuine Babbitt.

Globe Box Metal—Hayden Supply Co., Grand Rapids, Mich.

Glyco—Joseph T. Ryerson & Son, Chicago, Ill.

Golden Grain—The Bigsby Metals Co., The, Cleveland, O.

Government—Chadwick—Boston Lead Co., Boston, Mass.

Graham, James, & Co., New Haven, Conn.

Great Western Smelting & Refining Co., Chicago, Ill.

Hall Mfg. Co., Harrison, N. J.

Hartford Engine Wks., Hartford, Conn.

Helmet—Chas. H. Besly, Chicago, Ill.

Hercules Brass Bell Foundry Co., Cincinnati, O.

Hodge's—National Mfg. & Supply Co., Minneapolis, Minn.

Hoo-Hoo, Improved—More-Jones Brass & Metal Co., St. Louis, Mo.

♦ Hoyt Metal Co., St. Louis, Mo.

Hy-Test—L. G. Isaacson Co., Inc., Aberdeen, Wash.

Illinois Smelting & Refining Co., Chicago, Ill.

Improved Anti-Friction—Marks Lissberger & Son, Inc., Long Island City, N. Y.

Iron Age—Union Smelting & Refining Co., Newark, N. J.

Jerome—Edwards Metallic Packing Co., Chicago, Ill.

Johnson Bronze Co., New Castle, Pa.

Journal—Leddell Metals Co., Inc., Long Island City, N. Y.

Juanita—Wheeling Corrugating Co., Wheeling, W. Va.

Kinsey & Mahler Co., Peoria, Ill.

Lanning & Co., J. Frank, Pittsburg, Pa.

Laurel—Kinsey & Mahler Co., Peoria, Ill.

Lawrenceville Bronze Co., Pittsburg, Pa.

Leddellite—Leddell Metals Co., Inc., Long Island City, N. Y.

Lehman Bros., Hoboken, N. J.

Los Angeles Smelting Co., Los Angeles, Cal.

♦ Lumen Bearing Co., Buffalo, N. Y. (Trade names—Buffalo, Genuine, Cosmos, Stannum, Aristocrat, S. A. E., Standard, Yankee, Lotus, Leantini, Lubeco.)

Macomber & Whyte Rope Co., Chicago, Ill.

Magnetic—Brooklyn Alloys Co., Brooklyn, N. Y.

♦ Magnolia Metal Co., New York, N. Y.

♦ Medart Patent Pulley Co., St. Louis, Mo.

Mansfield—Pittsburg Brass Mfg. Co., Pittsburg, Pa.

Medium—Chadwick Boston Lead Co., Boston, Mass.

Merchant & Evans Co., Inc., Philadelphia, Pa. (Trade names—Hard Genuine, 1, 2, 3, 4, Standard Grade, Superior, Standard Genuine, Universal.)

Miller, Chas. & Sons Co., Utica, N. Y.

Mogul Babbitt—The Muzzy-Lyon Co., Ltd., Detroit, Mich.

Monarch Ball Metal—Monarch Metal Co., Chicago, Ill.

Monogram—John T. Lewis & Bros. Co., Baltimore, Md.

♦ Motex—I. M. Jacobson & Sons Co., Detroit, Mich.

Motor Alumaloy—Premium Metal & Packing Co., Inc., Wilkinsburg, Pa.

Motor—E. T. Post Metal Mfg. Co., New York, N. Y.

Multnomah—Multnomah Metal Works, Portland, Ore.

Murdoch, H. & Co., Pittsburgh, Pa. Trade names—Mill Bearing, Murdoch Railroad, Vanadium Genuine.

Murphy Metals Co., Chicago, Ill. Trade Names—Broncho, Ideal, Old Reliable, Samson, Master, Marathon, Mercury, Marvel, Old Reliable.

New Era Mfg. Co., Kalamazoo, Mich. Trade names—White Phosphoro Bronze No. 1 and No. 2, St. Ry. Special, Nemco, XX, X.

Noheet—Lubricating Metal Co., New York.

North American Smelting Co., Philadelphia, Pa.

North Star Foundry Co., Minneapolis, Minn.

Nuggett—The Bigsby Metals Co., Cleveland, O.

Old Coketown—Riverside Metal Refining Co., Connellsville, Pa.

Olympia—Great Western Smelting & Refining Co., Chicago, Ill.

Palmetto—Continental Metal Co., Brooklyn, N. Y.

Palmetto Metal Co., Chicago, Ill.

Perfection—Eastwood Wire Mfg. Co., Belleville, N. J.

Peerless—Extra, Peerless—High Speed, Peerless—Silver Genuine, Peerless Special—The Peerless Alloy Co., Denver, Colo.

Phillips, A. I. Best, Genuine, Extra, Five Point—F. R. Phillips & Sons Co., Philadelphia, Pa.

Phoenix—John T. Lewis & Bros. Co., Baltimore.

Phoenix—National Lead Co., New York, N. Y.

Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Porteous—The Edna Smelting & Refining Co., The, Cincinnati, O.

Premium—Premium Metal & Packing Co., Inc., Wilkinsburg, Pa.

Prize Ribbon—The Bigsby Metals Co., Cleveland, O.

Promet—The American Crucible Products Co., Elyria, O.

Puget Sound Metal Works, Tacoma, Wash.

Radium—Hewitt Sales Co., Detroit, Mich.

Rainbow—Peerless Smelting & Refining Co., Philadelphia, Pa.

Ravenswood Brass Foundry Co., Chicago, Ill.

Raymond Lead Co., Chicago, Ill.

Record—Union Smelting & Refining Co., New York, N. Y.

Reeves & Co., Paul S., Philadelphia, Pa.

Reliable—Chadwick-Boston Lead Co., Boston, Mass.

Rex—Pacific Metal Works, San Francisco, Cal.

Rico—Richards & Co., Inc., Boston, Mass.

Ridion Co., Frank, Boston, Mass.

Rinehart—North American Copper Co., New York, N. Y.

Rinehart—Pittsburgh White Metal Co., Pittsburgh, Pa.

Rochester Lead Works, Rochester, N. Y.

Rogers—Rogers Metal Works, Kansas City, Mo.

♦ Royal—Dodge Sales & Engineering Co., Mishawaka, Ind.

Rowell Mfg. Co., Appleton, Wis.

Sandoval Zinc Co., Chicago, Ill.

Semper Idem—Thos. Wildes' Son, Inc., New York, N. Y.

Shamrock—The Bigsby Metals Co., Cleveland, O.

Sico—Scully Steel & Iron Co., Chicago, Ill.

♦ Sillman's Apex—Michigan Smelting & Refining Co., Detroit, Mich.

Smiro—Smith & Robinson, Chicago, Ill.

Special—Premium Metal & Packing Co., Inc., Wilkinsburg, Pa.

♦ Standard Genuine Copaloy—Michigan Smelting & Refining Co., Detroit, Mich.

Standard Rolling Mill, Inc., Brooklyn, N. Y.

Standard Smelting & Refining Co., New York.

♦ Stando—Dodge Sales & Engineering Co., Mishawaka, Ind.

Stanley Process—Syracuse Smelting Wks., Brooklyn, N. Y.

Star—Leddell Metals Co., Inc., Long Island City, N. Y.

Syracuse—United American Metals Corp., Brooklyn, N. Y.

Thermite—Premium Metal & Packing Co., Inc., Wilkinsburg, Pa.

Torrey—Leddell Metals Co., Inc., Long Island City, N. Y.

Tractor—Lewin Metals Corp., St. Louis, Mo.

Union Brass & Metal Mfg. Co., St. Paul, Minn.

United Lead Co., St. Paul, Minn.

United Smelting & Aluminum Co., New Haven, Conn.

U. S. Reduction Co., Chicago, Ill.

U. S. A. Havabar, U. S. A. Long Life, U. S. A. Lodestar, U. S. A. Special—United Smelting & Aluminum Co., New Haven, Conn.

Usarco—Union Smelting & Refining Co., Inc., Newark, N. J. (Trade names—Armature, Copper Hardened, Economy, Naval Nickel, Record, Union Special, Union Genuine, Union White Brass.)

Vanduzen Co., The E. W., Cincinnati, O.

Velvet—The Bigsby Metals Co., Cleveland, O.

Vim—Bronze Metal Co., New York, N. Y.

Vulcan, H. S.—North American Smelting Co., Philadelphia, Pa.

Vulcan, Zenite—Zenite Metal Co., Indianapolis, Ind.

Wells Chemical Bronze Wks., Worcester, Mass.

Wensley Metal Products Co., The, Denver, Colo.

Wheeling Corrugating Co., Wheeling, Pa.

Wolf Metal Co., The, Cincinnati, Ohio.

X—The New Era Mfg. Co., Kalamazoo, Mich.

Zero—E. L. Post & Co., Inc., New York, N. Y.

#### METAL, "DELTA."

Phosphor Bronze Smelting Co., Philadelphia, Pa.

#### METALS, DIE CASTING.

Empire—Empire Metal Co., Syracuse, N. Y.

Sampson—Leddell Metals Co., Inc., Long Island City, N. Y.

#### METALS, EXPANDED.

(See "Lath, Expanded Metal.")

#### METALS, EXTRUDED, BRASS AND BRONZE.

Ambrac—The American Brass Co., Waterbury, Conn.

#### METALS, COATING OR PLATING.

American Solder & Flux Co., Philadelphia, Pa.

#### METALS, PERFORATED SHEET.

American Zinc Products Co., Greencastle, Ind. (zinc)

Barnard & Leas Mfg. Co., Moline, Ill.

Beckley Perforating Co., Garwood, N. J.

Central Stamping Co., New York

Clinton Wire Cloth Co., Clinton, Mass.

Cross Engineering Co., Carbondale, Pa.

Erdle Perforating Co., Rochester, N. Y.

Hendrick Mfg. Co., Carbondale, Pa.

Johnston & Chapman Co., Chicago, Ill.

Keller Mechanical Engraving Co., Brooklyn, N. Y.

Manpermetco—Manhattan Perforated Metal Co., New York.

Mundt & Sons, Charles, Jersey City, N. J.

Nortmann-Duffke Co., Milwaukee, Wis.

Stimpson Co., Edwin B., Brooklyn, N. Y.

Toepfer, W., & Sons Co., Milwaukee, Wis.

#### METALS, PULVERIZED.

Provo—Provost Engineering Corp., Brooklyn, N. Y.



**METAL, YELLOW.**

Detroit Copper & Brass Rolling Mills, Detroit.  
Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
H I M—Hartman Ingot Metal Co., Chicago, Ill.  
Randolph-Clowes Co., The, Waterbury, Conn. (sheets, circles, rods).  
Richards & Co., Inc., Boston, Mass.  
Taunton & New Bedford Copper Co., Taunton, Mass.

**METERS, ACETYLENE GAS.**

Frontier Meter Works, Buffalo, N. Y.  
Griffin & Co., John J., Philadelphia, Pa.  
La Porte Meter Co., La Porte, Ind.  
Phoenix Meter Co., Camden, N. J.  
Pittsburgh Meter Co., East Pittsburgh, Pa.

**METERS, AIR.**

Builders Iron Foundry, Providence, R. I.  
General Electric Co., Schenectady, N. Y.  
Metric Metal Works, Erie, Pa.  
Queen-Gray Co., Philadelphia, Pa.  
Republic—Republic Flow Meters Co., Chicago, Ill.  
Rotary—Rotary Meter Co., New York, N. Y.  
St. John, G. C., New York, N. Y.  
Sargent Steam Meter Co., Chicago, Ill.  
Westinghouse, Positive, Proportional — Pittsburgh Meter Co., East Pittsburgh, Pa.

**METERS, BLAST, FOR CUPOLAS AND FURNACES.**

Bacharach Industrial Instrument Co., Pittsburgh, Pa.

**METERS, BOILER EFFICIENCY.**

Blonck, W. A., & Co., Waterbury, Conn.

**METERS, BOILER RECORDING.**

Bailey—Bailey Meter Co., Cleveland, O.

**METERS, COAL, FOR STOKERS.**

C. J.—C. J. Mfg. Co., Philadelphia, Pa.

**METERS, COAL MEASURING.**

Havard—O. D. Havard Co., Allentown, Pa.

**METERS, CONDENSATION.**

Adscot Rotometers, Simplex—American District Steam Co., North Tonawanda, N. Y.  
Detroit—Central Station Steam Co., Detroit, Mich.  
Farnsworth—Farnsworth Mfg. Co., Boston, Mass.  
Mason—Plant Engineering & Equipment Co., New York, N. Y.  
Tyler Underground Heating System, Pittsburgh, Pa.

**METERS, CURRENT.**

Berger, C. L., & Sons, Boston, Mass.  
Price—W. & L. E. Gurley, Troy, N. Y.

**METERS, FEED WATER.**

Bailey Meter Co., Cleveland, O.  
Cochrane—H. S. B. W. Cochrane Corp., Philadelphia, Pa.  
Detroit—Central Station Steam Co., Detroit, Mich.  
Eureka—Pittsburgh Meter Co., East Pittsburgh, Pa.  
Harrison Safety Steam Boiler Co., Philadelphia, Pa.  
Hotwater—Hersey Meter Co., Boston, Mass.  
Keystone—Pittsburgh Meter Co., East Pittsburgh, Pa.  
Lambert—Thomas Meter Co., Brooklyn, N. Y.  
Niagara—Buffalo Meter Co., Buffalo, N. Y.  
Simplex—Yarnall-Waring Co., Philadelphia, Pa.  
Standard Water Meter Co., Philadelphia, Pa.  
Trident—Neptune Meter Co., New York, N. Y.  
Union Water Meter Co., Worcester, Mass.  
Willcox—Willcox Engineering Co., Saginaw, Mich.  
Worthington, Henry R., New York, N. Y.

**METERS, FREQUENCY.**

Bristols—Bristol Co., The, Waterbury, Conn.  
Roller-Smith Co., New York, N. Y.  
Weston—Weston Electrical Instrument Co., Newark, N. J.

**METERS, GAS.**

Bailey Meter Co., Cleveland, O.  
Builders Iron Foundry, Providence, R. I.  
American Meter Co., Chicago, Ill.  
Cleveland Gas-Meter Co., Cleveland, O.  
Equitable—Equitable Meter Co., Pittsburgh, Pa.  
Foulls, H. & McL—Helme & McIlhenny, Philadelphia, Pa.  
Foxboro Orifice—Industrial Instrument Co., Foxboro, Mass.  
Frontier Meter Works, Buffalo, N. Y.  
General Electric Co., Schenectady, N. Y.  
Griffin & Co., John J., Philadelphia, Pa.  
Hope Engineering & Supply Co., Pittsburgh, Pa.  
Ironclad—Pittsburgh Meter Co., East Pittsburgh, Pa.  
La Porte Meter Co., La Porte, Ind. (prepayment).

Metric Metal Works, Erie, Pa.  
Pittsburgh Meter Co., East Pittsburgh, Pa.  
Precision Instrument Co., Detroit, Mich.  
Republic—Republic Flow Meters Co., Chicago, Ill.  
Rotary—Rotary Meter Co., New York, N. Y.  
St. John, G. C., New York, N. Y.  
Spitzglass—Republic Flow Meters Co., Chicago, Ill.  
Sprague—Sprague Meter Co., The, Bridgeport, Conn.  
Standard Meter & Mfg. Co., New York, N. Y.  
Standard Meter Co., The, Philadelphia, Pa. (station).  
Tufts Meter Co., Nathaniel, Boston, Mass.  
Westinghouse—Pittsburgh Meter Co., E. Pittsburgh, Pa.  
Wylie—Equitable Meter Co., Pittsburgh, Pa.

**METERS, GAS, PREPAYMENT.**

Griffin, John J., & Co., Philadelphia, Pa.  
Reeves Mfg. Co., New Haven, Conn.

**METERS, GAS, PROPORTIONAL.**

(For Large Volumes of Gas.)

Ironclad—Pittsburgh Meter Co., E. Pittsburgh, Pa.

**METERS, GAS, RECORDING.**

Hydro—Bacharach Industrial Instrument Co., Pittsburgh, Pa.

**METERS, GASOLINE.**

Niagara—Buffalo Meter Co., Buffalo, N. Y.  
Neptune Meter Co., New York, N. Y.  
Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
Western Oil Pump & Tank Co., St. Louis, Mo.

**METERS, GRAIN.**

♦ Wolf Co., The, Chambersburg, Pa.

**METERS, HOT WATER.**

Builders' Iron Foundry, Providence, R. I.  
Niagara—Buffalo Meter Co., Buffalo, N. Y.  
Tyler Underground Heating System, Pittsburgh, Pa. (recording).  
Union Water Meter Co., Worcester, Mass.

**METERS, IRRIGATION.**

Randall Control & Hydrometric Corp., Los Angeles, Cal.

**METERS, LIQUID.**

Worthington Pump & Machinery Corp., New York, N. Y.

**METERS, LUMBER MEASURING.**

Durant Mfg. Co., Milwaukee, Wis.

**METERS, OIL.**

Badger—Badger Meter Mfg. Co., Milwaukee, Wis.  
Bailey Meter Co., Cleveland, O.  
Ball and Fitts—Union Water Meter Co., The, Worcester, Mass.  
Billow—National Supply Co., Chicago, Ill.  
Bowser, S. F., & Co., Fort Wayne, Ind.  
Empire—National Meter Co., New York, N. Y.  
Niagara—Buffalo Meter Co., Buffalo, N. Y.  
Pittsburgh Meter Co., East Pittsburgh, Pa.  
Richardson-Phenix Co., Milwaukee, Wis.  
Rockwell Furnace Co., New York, N. Y.  
Trident—Neptune Meter Co., New York, N. Y.  
Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
Worthington—Henry R. Worthington, New York.

**METERS, POWER FACTOR.**

Roller-Smith Co., New York.

**METERS, STEAM FLOW.**

Bailey Meter Co., Cleveland, O.  
Builders Iron Foundry, Providence, R. I.  
Cochrane Corp., H. S. B. W., Philadelphia, Pa.  
Gebhardt, Republic—Republic Flow Meters Co., Chicago.  
General Electric Co., Schenectady, N. Y.  
Metric Metal Works, Erie, Pa.  
♦ St. John—American District Steam Co., North Tonawanda, N. Y.  
St. John—C. C. St. John, New York, N. Y.  
Sarco—Sarco Fuel Saving & Eng. Co., New York.  
Simplex—American District Steam Co., N. Tonawanda, N. Y.

**METERS, TESTING, PORTABLE.**

(For Testing Water Meters.)

American—Buffalo Meter Co., Buffalo, N. Y.

**METERS, WATER.**

American—Buffalo Meter Co., Buffalo, N. Y.  
Arctic—Pittsburgh Meter Co., East Pittsburgh, Pa.  
Badger—Badger Meter Mfg. Co., Milwaukee, Wis.  
Bailey Meter Co., Cleveland, O.  
Cincinnati—American Valve & Meter Co., Cincinnati



Crown—National Meter Co., New York, N. Y.  
 Detector—Hersey Mfg. Co., South Boston, Mass.  
 Disco—Hersey Mfg. Co., South Boston, Mass.  
 Empire, Compound, Premier—National Meter Co., New York, N. Y.  
 Eureka—Pittsburgh Meter Co., East Pittsburgh, Pa.  
 Gem—National Meter Co., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Hammond—Alberger Pump & Condenser Co., New York, N. Y.  
 Keystone—Pittsburgh Meter Co., East Pittsburgh, Pa.  
 King Disk—Union Water Meter Co., Worcester, Mass.  
 Lambert—Thomson Meter Co., Brooklyn, N. Y.  
 Nash—National Meter Co., Chicago, Ill.  
 New Niagara—Buffalo Meter Co., Buffalo, N. Y.  
 Niagara—Buffalo Meter Co., Buffalo, N. Y.  
 Nilo—Union Water Meter Co., Worcester, Mass.  
 Precision Instrument Co., Newark, N. J.  
 Republic Flow Meter Co., Chicago, Ill.  
 Rotary—Hersey Mfg. Co., South Boston, Mass.  
 Simplex—Simplex Valve & Meter Co., Philadelphia, Pa.  
 Thomson Meter Co., Brooklyn, N. Y.  
 Torrent—Hersey Mfg. Co., South Boston, Mass.  
 Trident—Weber Subterranean Pump Co., New York, N. Y.  
 Trident Crest, Compound, Protectus—Neptune Meter Co., New York, N. Y.  
 Trident Disk—Neptune Meter Co., New York, N. Y.  
 Tyler Underground Heating System, Pittsburgh, Pa.  
 Utility—Pittsburgh Meter Co., East Pittsburgh, Pa.  
 Watch Dog—Gamon Meter Co., Newark, N. J.  
 Water Cart—Hersey Mfg. Co., South Boston, Mass.  
 Willcox—Willcox Engineering Co., Saginaw, Mich.  
 Worthington—Henry R. Worthington, New York.

**METERS, WATER FLOW.**

G-E—General Electric Co., Schenectady, N. Y.  
 Industrial Instrument Co., Foxboro, Mass.  
 Republic—Republic Flow Meters Co., Chicago, Ill.  
 Spray Engineering Co., Boston, Mass.  
 V. Notch—Hoppes Mfg. Co., Springfield, O.  
 Water Witch—The Hydrometric Co., Los Angeles, Cal.  
 Weir V-Notch—Bailey Meter Co., Cleveland, O.  
 ♦ Yarway—Lea V. Notch—Yarnall-Waring Co., Philadelphia, Pa.

**METERS, WATER, FOR FILLING SEWER FLUSH TANKS.**

Buffalo Jet—Buffalo Meter Co., Buffalo, N. Y.  
 Hobb Mfg. Co., Worcester, Mass.  
 I. K. L.—Pacific Flush Tank Co., Chicago, Ill.  
 Modern Iron Works, Quincy, Ill.

**MICROMETERS.**

Almond—T. R. Almond Mfg. Co., Ashburnham, Mass.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Columbia—Columbia Caliper Co., Marietta, Pa.  
 Goodell-Pratt Co., Greenfield, Mass.  
 G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Reed Reliable Line—Reed Small Tool Works, Worcester, Mass.  
 Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Simplex Tool Co., Woonsocket, R. I.  
 Slocomb—J. T. Slocomb Co., Providence, R. I.  
 Starrett, The L. E. Co., Athol, Mass.  
 Universal—The Scheellenbach-Hunt Tool Co., Cincinnati, O.  
 U. S. Mica Mfg. Co., Chicago, Ill.

**MILLBOARD, ASBESTOS.**

Asbestos & Rubber Works of America, New York.  
 Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Carey—Phillip Carey Mfg. Co., Cincinnati, O.  
 Central Foundry Supply Co., Columbus, Ohio.  
 Dominion Asbestos and Rubber Corp., New York.  
 Dragon—C. W. Trainer Mfg. Co., Boston, Mass.  
 Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
 Federal Asbestos Mfg. Co., The, Alliance, O.  
 Franklin Mfg. Co., Franklin, Pa.  
 ♦ Garco—General Asbestos & Rubber Co., Charleston, S. C.  
 Jack, A. W. Corp., Lockport, N. Y.  
 Janos Asbestos Co., New York.  
 ♦ Johns-Manville, Inc., New York, N. Y.  
 Kern Commercial Co., New York, N. Y.  
 ♦ K. & M.—Keesbey & Mattison Co., Ambler, Pa.  
 Mikesell Bros. Co., Chicago, Ill.  
 Norristown Magnesia & Asbestos Co., Norristown, Pa.  
 Perfection Tire & Rubber Co., Fort Madison, Ia.  
 Sall Mountain Co., Chicago, Ill. Trade names—Alaska Pipe Covering, Expanded, Multicell.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 Watson, H. F., Erie, Pa.

**MILLERS, KEY SEATING.**

(See also "Machines, Keyseating.")

National Machine Tool Co., Cincinnati, O.

**MILLS, BALL, JAR, LABORATORY, PEBBLE, TUBE AND SAMPLE.**

Alsing Engineering Co., J. R., New York.  
 Beach Russ Co., New York, N. Y.  
 Bethlehem—Bethlehem Foundry & Machine Co., Bethlehem, Pa.  
 Marcy—Mine & Smelter Supply Co., Salt Lake City, Utah.  
 Smidth, F. L. & Co., New York, N. Y.

**MILLS, BARB SHAVING.**

Stroud, E. H., & Co., Chicago, Ill.

**MILLS, CINDER, IRON AND BRASS.**

Sly, W. W., Mfg. Co., Cleveland, O.  
 Monarch—Moussette, O. J., Co., Inc., New York, N. Y.

**MILLS, END, HOLLOW, ADJUSTABLE HOLLOW AND SHELL.**

Advance Tool Co., Cincinnati, O.  
 American Twist Drill Co., Detroit, Mich.  
 Ampco—American Machine Products Co., Detroit, Mich.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Chapin-Skelton Corp., Syracuse, N. Y.  
 Cowles Tool Co., Cleveland, O.  
 Detroit Reamer & Tool Co., Detroit, Mich.  
 Gammons—The Gammon-Holman Co., Manchester, Conn.  
 Genesee—Genesee Mfg. Co., Rochester, N. Y.  
 Gorham Tool Co., Detroit, Mich.  
 Hoenscheld Forged Twist Drill & Tool Co., Detroit, Mich.  
 Manning Maxwell & Moore, Inc., Fitchburg, Mass.  
 McCarthy Drill & Tool Co., New York, N. Y.  
 ♦ National-Cleveland—National Tool Co., Cleveland, O.  
 Novo—Boker, H., & Co., Inc., New York, N. Y.  
 Porter Cable Machine Co., Syracuse, N. Y.  
 Scott-Spencer Automatic Tool Co., The, Cincinnati, Ohio.  
 Standard Tool Co., Cleveland, O.  
 Thurco—Thurston Mfg. Co., Providence, R. I.  
 Toledo Drill & Tool Co., Toledo, O.  
 U. S. High Speed Steel & Tool Corp., New York, N. Y.  
 Wear Ever—Scully, Jones & Co., Chicago, Ill.  
 Welch, T. F., & Co., Boston, Mass.

**MILLS, FEED AND MEAL GRINDING.**

(For Flour Mills, see Machinery Flour Mill.)

American Marvel—Anglo-American Mill Co., Owensboro, Ky.  
 Appleton Mfg. Co., Batavia, Ill.  
 Atlanta—Southern Saw & Mach'y Works, Atlanta, Ga.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Bercha—Dempster Mill Mfg. Co., Beatrice, Neb.  
 ♦ Buhr Mills—Nordyke & Marmon Co., Indianapolis, Ind.  
 Brown, A. & F., Co., New York, N. Y.  
 Cincinnati Planer Co., Cincinnati, Ohio.  
 Decatur Foundry, Furnace & Machine Co., Decatur, Ind.  
 Dempster Mill Mfg. Co., Beatrice, Neb.  
 Erie Clutch & Pulley Co., Erie, Pa.  
 Hendley & Whittmore Co., Beloit, Wis.  
 Howell—R. R. Howell & Co., Minneapolis, Minn.  
 Jewel, Superior—Duplex Mfg. Co., Superior, Wis.  
 Lansing Motor & Pump Co., Lansing, Mich.  
 Monitor—Baker Mfg. Co., Evansville, Wis.  
 Munson Buhrstone—Munson Bros. Co., Utica, N. Y.  
 Munson Mill Machinery Co., Inc., Utica, N. Y.  
 Nelson Bros. Co., Saginaw, Mich.  
 New Holland—New Holland Machine Co., New Holland, Pa.  
 Orville Simpson Co., Cincinnati, O. Trade names—Bradford, Export, Queen of the South, Planters' Pride, Straub.  
 Perfect—Wm. E. Pratt Mfg. Co., Chicago, Ill.  
 Perkins Windmill & Engine Co., Mishawaka, Ind.  
 Red Chief—Red Chief Mfg. Co., Louisville, Ky.  
 Sheldon—Sheldon Engine & Sales Co., Waterloo, Iowa.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Standard—Ajax Mfg. Co., Pittsburgh, Pa.  
 Stover—Stover Mfg. & Engine Co., Freepport, Ill.  
 Stroud, E. H., & Co., Chicago, Ill.  
 Superior Mfg. & Mill Co., Springfield, Ohio.  
 Union Engineering Co., Cleveland, O.  
 United Engine Co., Lansing, Mich.  
 Unique—Robinson Mfg. Co., Muncy, Pa.  
 W-W—The W-W Feed Grinder Co., Wichita, Kan.  
 Whitman Agricultural Co., St. Louis, Mo.  
 Williams Patent Crusher & Pulverizer Co., St. Louis.  
 Williams Portable—Williams Mill Mfg. Co., The Ronda, N. C.  
 Wolf Company, The, Chambersburg, Pa. Mo.

**MILLS, INK GRINDING.**

Houchin—Aiken Co., Brooklyn, N. Y.

**MILLS, GRAPHITE GRINDING.**

Munson Mill Machinery Co., Inc., Utica, N. Y.

**MILLS, ROLLING (FOR BRASS, COPPER, SILVER, LEAD, ETC.).**

(See also "Machinery, Rolling Mill.")

Blake & Johnson Co., The, Waterbury, Conn.  
Farrell Foundry & Machine Co., Ansonia, Conn.  
Garrison, A., Foundry Co., Pittsburg, Pa.  
Mackintosh Hemphill & Co., Pittsburg, Pa.

#### MILLS, SOAP.

(See also "Machinery, Soap.")  
Houchin—Aiken Co., Brooklyn, N. Y.

#### MILLS, SPIRAL, SURFACE.

Windau Tool Co., Cleveland, O.

#### MILLS, TUNNELING, SAND BLAST.

Obermayer, S. Co., The, Cincinnati, Ohio.  
Sly, W. W., Mfg. Co., Cleveland, O.

#### MILLSTONES.

Munson Mill Machinery Co., Inc., Utica, N. Y.

#### MIRRORS, BATHROOM.

Aetna Mfg. & Plating Co., Chicago, Ill.  
Art Brass Co., The, New York, N. Y.  
Bernz Co., Otto, Newark, N. J.  
Brasscrafters—J. F. Eustis Mfg. Co., Boston, Mass.  
Celluvarno—Silcock-Miller Co., South Orange, N. J.  
Central Specialty Mfg. Co., Chicago, Ill.  
Eastern Specialty Mfg. Co., Scranton, Pa.  
Garden City Plating & Mfg. Co., Chicago, Ill.  
Mott Iron Works, The J. L., Trenton, N. J.  
Newman Mfg. Co., The, Cincinnati, O.  
Nurre Mirror Plate Co., The, Bloomington, Ind.  
Omala—The Galard Co., New York, N. Y.  
Palette—Searls Mfg. Co., Newark, N. J.  
Red Cross—L. Cline Mfg. Co., Chicago, Ill.  
Saginaw Mirror Works, Saginaw, Mich.  
Sanitary Specialties Co., Philadelphia, Pa.  
Sanoid—Conant Bros. Co., Somerville, Mass.  
Silver & Co., Brooklyn, N. Y.  
Simco—Silcock-Miller Co., South Orange, N. J.  
Smith Mfg. Co., E. C., Chicago, Ill.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.

#### MITTENS, ASBESTOS, LEATHER.

Wheeler—F. H. Wheeler Mfg. Co., Chicago, Ill.

#### MIXERS, CONCRETE AND MORTAR.

Acme—Acme Road Machinery Co., Frankfort, N. Y.  
American Cement Mach. Co., Keokuk, Ia.  
American—Good Roads Machinery Co., Kennett Square, Pa.  
Archer Iron Works, Chicago, Ill.  
Atlas—Atlas Engineering Co., Milwaukee, Wis.  
Austin, F. C., Co., Inc., Chicago, Ill.  
Badger Concrete Mixer Co., Milwaukee, Wis.  
Bartlett & Snow Co., The C. O., Cleveland, O.  
Blystone—Blystone Mfg. Co., Cambridge Springs, Pa.  
Boss—American Cement Mach. Co., Inc., Keokuk, Ia.  
Builders—American Cement Machine Co., Inc., Keokuk, Ia.  
Cement Tile Mach. Co., Waterloo, Ill.  
C. H. & E.—C. H. E. Mfg. Co., Milwaukee, Wis.  
Chain Belt—Chain Belt Co., Milwaukee, Wis.  
Chicago Builders' Specialty, Chicago.  
Chicago—Municipal Engineering & Contracting Co., Chicago.  
Dunn—W. E. Dunn Mfg. Co., Holland, Mich.  
Dunning, W. D., Syracuse, N. Y.  
Elite Mfg. Co., Ashland, O.  
Eureka—Eureka Machine Co., Lansing, Mich.  
Foot Concrete Mach. Co., Chicago, Ill.  
Gray Iron Foundry Co., Reading, Pa.  
Hall-Holmes Mfg. Co., Jackson, Mich.  
Hayden—Hayden Automatic Block Machine Co., Columbus, O.  
Ideal Concrete Machinery Co., Cincinnati.  
Interstate—Interstate Equipment Co., South Bend, Ind.  
Iowa—Iowa Foundry & Mfg. Co., Ft. Dodge, Ia.  
Jaeger—Jaeger Machine Co., Columbus, O.  
Kelbourne & Jacobs Mfg. Co., The, Columbus, O.  
Kelly—F. H. Clark Mfg. Co., Cleveland, O.  
Kent Machine Co., The, Kent, O.  
Knickerbocker Co., The, Jackson, Mich.  
Koehring—Koehring Machine Co., Milwaukee, Wis.  
Lakewood, Lakewood-Milwaukee, Lakewood-M. C.—The Lakewood Engineering Co., Cleveland, O.  
Lansing Co., Lansing, Mich.  
Little Wonder—Waterloo Cement Machinery Corp., Waterloo, Ia.  
Mey Chain Belt Co., Buffalo, N. Y.  
Milwaukee—Milwaukee Concrete Mixer Co., Milwaukee, Wis.  
Moak Machine & Tool Co., Port Huron, Mich.  
Mousette, O. J., Co., Inc., Brooklyn, N. Y.  
Northwestern—Northwestern Steel & Iron Wks., Eau Claire, Wis.  
Oshkosh Mfg. Co., Oshkosh, Wis.  
Packard—American Cement Machine Co., Inc., Keokuk, Iowa.

Packard—Contractors' Machinery Co., Keokuk, Iowa.  
Power & Mining Mach. Co., Cudahy, Wis.  
Ransome—Ransome Concrete Mach'y Co., Dunellen, N. J.  
Reading—Biehl Iron Works, Inc., The, Reading, Pa.  
Sackett, H. B., Screen & Chute Co., Chicago, Ill.  
Schramm, Chris. D., & Son, Inc., Philadelphia, Pa.  
Sheldon—Sheldon Engine & Sales Co., Waterloo, Iowa.  
Shirk—Blue Ball Machine Works, Blue Ball, Pa.  
Simplex—Miles Mfg. Co., The, Jackson, Mich.  
Smith—The T. L. Smith Co., Milwaukee, Wis.  
Standard—The Standard Scale & Supply Co., Pittsburgh, Pa.  
Turl's Sons, John, New York, N. Y.  
Union—Union Iron Works, Hoboken, N. J.  
United, United Junior—United Engine Co., Lansing, Mich.  
Wonder—Construction Machinery Co., Waterloo, Ia.

#### MIXERS, CONCRETE, STREET PAVING.

Badger Concrete Mixer Co., Milwaukee, Wis.  
Chain Belt Co., Milwaukee, Wis.  
Eureka—Eureka Machine Co., Lansing, Mich.  
Foote—The Foote Co., Inc., Nunda, N. Y.  
Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
Smith—T. L. Smith Co., Milwaukee, Wis.

#### MIXERS, GAS AND AIR.

(See also "Regulators, Gas.")

Advance, Kittanning—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
Columbus Brass Co., Columbus, O.  
Denny's—Climax Mach. & Burner Co., Newark, N. J.  
♦ Detroit Enterprise, Globe, Kittanning, Stewart, Adjustable Shield, Economy—Detroit Brass & Malleable Works, Detroit, Mich.  
Direct Jet—Johnson Gas Appliance Co., Cedar Rapids, Iowa.  
Eclipse—Eclipse Fuel Engineering Co., Rockford, Ill.  
Eriez—Eriez Stove & Mfg. Co., Erie, Pa.  
Franklin—The Columbus Brass Co., Columbus, O.  
Hale—Hale Gas Mixer Mfg. Co., Kansas City, Mo.  
♦ Hays Mfg. Co., Erie, Pa.  
Improved Appliance Co., Brooklyn, N. Y.  
Kaufman Mfg. Co., The A. E., New York, N. Y.  
Keystone—Wilson & Daum Co., Pittsburgh, Pa.  
Matlack—W. H. Matlack, Louisville, Ky.  
♦ McRae & Roberts Co., The, Detroit, Mich.  
Miller—Modern Iron Works, Quincy, Ill.  
Nichol, Thos. J., & Co., Cincinnati, O.  
Ohio Pump & Brass Co., The, Columbus, O.  
Roberts Brass Mfg. Co., The, Detroit, Mich.  
Selas—Selas Co., Philadelphia, Pa.  
Superior—The Superior Mfg. Co., Allegheny, Pa.

#### MIXERS, HOT AND COLD WATER, LAVATORY.

Bloom—Bloom Flusher Co., Tiffin, Ohio.

#### MIXERS, METAL.

Koven, L. O., & Bros., Jersey City, N. J.  
Mesta Machine Co., Pittsburg, Pa.  
Pennsylvania Engineering Works, New Castle, Pa.  
Riter-Conley Co., Pittsburgh, Pa.

#### MIXERS, PAINT.

Canton—Canton Fdry. & Machine Co., Canton, O.  
Franklin Machine Co., Providence, R. I.  
Lynn Superior—Lynn-Superior Co., Cincinnati, O.

#### MIXERS, PASTE.

Advance-Wetmore—Advance Machinery Co., Van Wert, O.  
Colton—Arthur Colton Co., Detroit, Mich.

#### MIXERS, ROTARY.

Rotary—O. J. Mousette Co., Inc., New York, N. Y.

#### MIXERS, RUBBER, CEMENT.

American Tool & Machine Co., Boston, Mass.  
Blizzard—The Monarch Engineering & Mfg. Co., Baltimore, Md.

#### MIXERS, SAND.

Blystone Machinery Co., Cambridge Springs, Pa.  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Frost Mfg. Co., Galesburg, Ill.  
Obermayer, S. Co., The, Cincinnati, Ohio.  
Link-Belt Company, Chicago and Philadelphia.  
Sellers & Co., Inc., Wm., Philadelphia, Pa.  
Shannon, J. Jacob & Co., Philadelphia, Pa.  
Standard Sand & Machine Co., Cleveland, O.  
Wadsworth—Wadsworth Core Machine & Equipment Co., Akron, O.

#### MIXERS, SHOWER BATH.

(See also "Cocks, Shower Bath.")

Bloom—Bloom Flusher Co., Tiffin, O.  
Essex Brass Corp., Detroit, Mich.

Fulber—Single Faucet & Flush Valve Co., Chicago, Ill.  
 Goetz Brass Co., Chicago, Ill.  
 Hapoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Imperial—Imperial Brass Mfg. Co., Chicago.  
 Ingham—Imperial Brass Mfg. Co., Chicago, Ill.  
 Lawler Automatic—Lawler Regulator Co., New York.  
 Matthews, W. N., & Brother, Inc., St. Louis, Mo.  
 Milwaukee—Milwaukee Flush Valve Co., Milwaukee, Wis.  
 Mott, J. L., Iron Works, Trenton, N. J.  
 New Jersey Tube Co., New York, N. Y.  
 Niedecker—Hoffmann & Billings Mfg. Co., Milwaukee.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Tempo—Jamea H. Shannon Mfg. Co., Chicago, Ill.  
 Trinity—Goetz Brass Company, Chicago, Ill.

**MIXERS, TURBINE ROTARY.**

Johnson—John Johnson Co., Brooklyn, N. Y.

**MOISTENERS, AIR.**

Illinois Combination, Ezyfield—Illinois Flower Box Co., Chicago, Ill.  
 Logansport Radiator Equipment Co., Logansport, Ind.  
 Marsh—James P. Marsh & Co., Chicago, Ill.  
 Onward—Onward Mfg. Co., Menasha, Wis. (attached to heating furnaces and boilers).  
 Roral—C. C. Shipp & Co., Indianapolis, Ind.  
 Sanitary Air Filtering Radiator Shield Co., Chicago, Ill.  
 Savo—Savo Mfg. Co., Chicago (for radiators and registers).  
 Speco—Specialty Mfg. Co., St. Paul, Minn.

**MOLYBDENUM.**

American Smelting & Refining Co., New York.

**MONEL METAL RODS, STRIPS, AND WIRE.**

Driver-Harris Wire Co., Harrison, N. J.  
 Hungerford, U. T., Brass & Copper Co., New York, N. Y.  
 Michigan Wire Cloth Co., Detroit, Mich.

**MONEL WHITE METAL, FOR VALVES, ETC.**

International Nickel Co., New York City.  
 Steel Sales Corp., Chicago, Ill.

**MOPS, ENGINEERS'.**

Double Diamond, Wear Well—C. H. Ellert Mfg. Co., Evansville, Ind.  
 Estes Mills, Fall River, Mass.  
 Massasoit Mfg. Co., Fall River, Mass.

**MOTORS, AIR.**

Allis-Chalmers Co., Milwaukee, Wis.  
 Chicago Pneumatic Tool Co., Chicago, Ill.  
 Chisholm & Moore Mfg. Co., Cleveland, O.  
 Cleveland Pneumatic Tool Co., Cleveland, O.  
 Dake—Dake Engine Co., Grand Haven, Conn.  
 Detroit Holst & Machine Co., Detroit, Mich.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Helwig—Helwig Mfg. Co., St. Paul, Minn.  
 Imperial—Ingersoll-Rand Co., New York, N. Y.  
 Independent Pneumatic Tool Co., Chicago, Ill.  
 Roto Co., The, Hartford, Conn.  
 Shepard Electric Crane & Holst Co., Montour Falls, N. Y.  
 South Park Machine & Supply Co., Port Huron, Mich.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**MOTOR, ALUMINUM ALLOY.**

Premium Metal and Packing Co., Wilkinsburg, Pa.

**MOTORS AND DYNAMOS, ELECTRIC.**

A. B.—The National Screw & Tack Co., Cleveland, O. (for washing machines, household and office appliance).  
 Allis-Chalmers Co., Milwaukee, Wis.  
 Bell—Bell Electric Motor Co., New York, N. Y.  
 Bodine—Bodine Electric Co., Chicago, Ill. (small).  
 Century—Century Electric Co., St. Louis, Mo.  
 Clark, H. W., Co., Mattoon, Ill.  
 Crocker-Wheeler Co., Ampere, N. J.  
 Dayton—A. C. Electrical Mfg. Co., Dayton, Ohio.  
 Dean Control—The Cutler-Hammer Co., Milwaukee, Wis.  
 De Laval—De Laval Steam Turbine Co., Trenton, N. J.  
 Diehl Mfg. Co., Elizabethport, N. J.  
 Dumore—Wisconsin Electric Co., Racine, Wis. (fractional horsepower).  
 Duro—Duro Pump & Mfg. Co., Dayton, O.  
 Electric Blower Co., Boston, Mass.  
 Emerson—The Emerson Electric Mfg. Co., St. Louis, Mo.  
 Engberg's Electric & Mechanical Works, St. Joseph, Mich.  
 Esco—Electric Specialty Mfg. Co., Stamford, Conn.  
 Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.  
 Fidelity Electric Co., Lancaster, Pa.

General Electric Co., Schenectady, N. Y.  
 Gilbert Co., C. A., New Haven, Conn.  
 "H. C."—Holtzer-Cabot Electric Co., Brookline, Mass.  
 Hamilton Beach—Hamilton-Beach Mfg. Co., Racine, Wis.  
 High-Grade—Eck Dynamo & Motor Co., Belleville, N. J.  
 Holt Electric Co., Milwaukee, Wis.  
 Ideal Electric & Mfg. Co., The, Mansfield, O.  
 Inter-Pole—Electro-Dynamic Co., Bayonne, N. J.  
 Interchangeable—A. Rosenberg Motor & Mfg. Co., Baltimore, Md.  
 Invincible—Century Electric Co., St. Louis, Mo. (small).  
 Janette Mfg. Co., Chicago, Ill.  
 Kimble—Kimble Electric Co., Chicago, Ill. (A. C.).  
 Lincoln—Lincoln Electric Co., The, Cleveland, O.  
 Marathon Electric Mfg. Co., Chicago, Ill.  
 Multispeed, Watson—The Mechanical Appliance Co., Milwaukee, Wis.  
 Northern—Northern Electrical Mfg. Co., Madison, Wis.  
 Ohio Electric & Controller Co., Cleveland, O.  
 Peerless—The Peerless Electric Co., Warren, O.  
 Phoenix Electric Co., Mansfield, O.  
 Polyphase—Burke Electric Co., Cincinnati, O.  
 Potts, D. H., Co., Lancaster, Pa.  
 Racine Universal Motor Co., Chicago, Ill. (small).  
 Reliance—Reliance Electric & Engineering Co., Cleveland, O.  
 Robbins & Myers Co., The, Springfield, O.  
 Rochester Electric Products Corp., Rochester, N. Y.  
 Rothmotors—Roth Bros. & Co., Chicago.  
 Service—Rochester Electric Motor Co., Rochester, N. Y.  
 ♦ Sherman—Sherman, H. B., Mfg. Co., Battle Creek, Mich. (fractional horsepower).  
 Sprague Electric Works, New York, N. Y.  
 Star Fan & Motor Works, Newark, N. J.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Swing Electric Co., Cincinnati, O.  
 Triumph—Triumph Electric Co., Cincinnati, O.  
 Tuerk—Tuerk Water Motor Co., Chicago, Ill. (electric).  
 U. S.—U. S. Electrical Mfg. Co., Los Angeles, Cal.  
 Utility—Delco-Light Company, Dayton, O.  
 Wagner Electric Mfg. Co., St. Louis, Mo.  
 Western Electric Co., Chicago, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.  
 ♦ Wiley—Jas. Clark, Jr., Electric Co., Louisville, Ky.  
 Wisconsin Electric Co., Racine, Wis.  
 Woods, S. A., Machine Co., The, Boston, Mass.

**MOTORS, GASOLINE.**

(See "Engines, Gasoline.")

**MOTORS, ORGAN BLOWING.**

Backus—Backus Water Motor Co., Newark, N. J.  
 Little Giant—The Hydraulic Iron Works, Erie, Pa.  
 Organ Blowing Engine Co., Fond du Lac, Wis.  
 Orgoblo, Spencer—The Spencer Turbine Co., Hartford, Conn.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.

**MOTORS, SPRING, FOR PHONOGRAPHS, ETC.**

Hedason Mfg. Co., New Haven, Conn.  
 Krasberg Mfg. Co., Chicago, Ill.

**MOTORS, WATER.**

Backus—Backus Water Motor Co., Newark, N. J.  
 Boston—F. E. Whitney Co., Boston, Mass.  
 Buckeye—The Buckeye Pump & Mfg. Co., Columbus.  
 Clipper—The Rhodes Mfg. Co., Hartford, Conn.  
 Dayton Water Motor Co., Dayton, Ohio.  
 Devine Bros. Co., Utica, N. Y.  
 Eclipse—Traverse City Iron Works, Traverse City, Mich.  
 Gem—Geo. J. Roberts Co., Dayton, O.  
 Lippincott—A. C. Lippincott, East Orange, N. J.  
 Little Giant—Hydraulic Iron Works, Erie, Pa.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Norton—Norton Water Motor Co., Inc., Roslindale, Mass.  
 Red Devil—Smith & Hemenway Co., Irvington, N. J.  
 Saal, H. G., Co., Chicago, Ill.  
 Simplex—Hawkins Pump Works, Downer's Grove, Ill.  
 Sims—Bowers Machine Co., Lancaster, Pa.  
 Specialty—Indiana Fan Co., Indianapolis, Ind.  
 Symond—Symmonds Automatic Water Wheel Co., Buffalo, N. Y.  
 Watson—Stillman Co., New York, N. Y.

**MOTORS, OR TRAPS, WATER-SEAL.**

Webster—Warren Webster & Co., Camden, N. J.

**MOULDS FOR BABBITT, LEAD, SOLDER, ETC.**

Schweizer, Chas. K., Co., St. Louis, Mo.

**MOULDS, CONCRETE PIPE.**

Eclipse Machine Co., Kendallville, Ind.

**MOULDS, INGOT.**

Blairsville Iron Works, Blairsville, Pa.

Leiman Bros., New York, N. Y. (Jewelers').  
 Marshall Foundry Co., Pittsburgh, Pa.  
 Oliver, W. W. Mfg. Co., The, Buffalo, N. Y.  
 Union Foundry & Mach. Co., Pittsburgh, Pa.  
 U. S. United States Smelting Furnace, Belleville, Ill.  
 (sectional).

#### MOULDS, LEAD FLANGE.

Cruickshank—Cruickshank Engine Co., Providence.  
 Williams Foundry & Machine Co., Akron, O.

#### MOULDS, RUBBER GOODS.

Akron Gear & Engineering Co., Akron, O.  
 Eggers, Wm. J., Brooklyn, N. Y.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.  
 Hoggson & Pettis Mfg. Co., New Haven, Conn.  
 Sagamore Motor Works, Lynn, Mass.  
 Taplin-Rice-Clerkin Co., Akron, O.

#### MOULDS, SOFT METAL, HAMMER AND VISE JAW.

Field, Chas. H., Providence, R. I.

#### MOULDS, SOLDER AND LEAD.

Bernz, Otto, Newark, N. J.  
 Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
 Johnson, Wm., Newark, N. J.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Modern Iron Works, Quincy, Ill. (strap solder).

#### MOULDS, TACK.

Bernz Co., Otto, Newark, N. J.  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Johnson, Wm., Newark, N. J.  
 Mueller Mfg. Co., H., Decatur, Ill.

#### MOVERS OR PUSHERS, CAR.

- ◆ Atkins A. A. A.—E. C. Atkins Co., Indianapolis, Ind.
- ◆ Atlas—Appleton Car Mover Co., Appleton, Wis.
- ◆ Badger, Junior—Advance Car Mover Co., Appleton, Wis.
- ◆ Buffalo Contractors' Plant Corps, Buffalo, N. Y.
- ◆ Caldwell, H. W., & Son Co., Chicago, Ill.
- ◆ Dodge Sales & Engineering Co., Mishawaka, Ind.
- ◆ Easy—E. H. Stafford Mfg. Co., Chicago, Ill.
- ◆ Ideal—H. B. Sackett Screen & Chute Co., Chicago, Ill.
- ◆ Link-Belt Company, Chicago and Philadelphia.
- ◆ Never Slip—Hilts Wrench & Mfg. Co., Richford, N. Y.
- ◆ New Badger—Advance Car Mover Co., Appleton, Wis.
- ◆ New Never Slip—Appleton Car Mover Co., Appleton, Wis.
- ◆ Oshkosh Mfg. Co., Oshkosh, Wis.
- ◆ Rowell—G. D. Rowell & Son, Appleton, Wis.
- ◆ Samson—G. D. Rowell & Son, Appleton, Wis.
- ◆ Sheldon—The Aldon Co., Chicago, Ill.
- ◆ Universal—Wentink Mfg. Corp., Menasha, Wis.
- ◆ Verona—Verona Tool Works, Pittsburgh, Pa.
- ◆ Weller Mfg. Co., Chicago, Ill.
- ◆ Zelnicker Double Clutch—Walter A. Zelnicker Supply Co., St. Louis, Mo.

#### MUFFLERS, EXHAUST, STEAM.

- ◆ Garrett, W. D., & Co., New York.
- ◆ Jamison, T. H., Claysville, Pa.
- ◆ Koven, L. O., & Bro., Jersey City, N. J.
- ◆ Linton—Linton Machine Co., New York, N. Y.
- ◆ McAlear Mfg. Co., The, Chicago, Ill.
- ◆ Penberthy—Penberthy Injector Co., Detroit, Mich.
- ◆ Shaw's—Quimby Engineering Co., Philadelphia, Pa.
- ◆ Standard Steam Specialty Co., New York, N. Y.
- ◆ Utility—Standard Steam Specialty Co., New York.
- ◆ Watson—Watson & McDaniels Co., Philadelphia, Pa.

#### MUFFLERS, SAFETY VALVE.

Ashton Valve Co., Boston, Mass.  
 Consolidated—The Consolidated Safety Valve Co., New York, N. Y.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.

#### MUNTZ, METAL, PLATES, SHEETS AND RODS.

Detroit Copper & Brass Rolling Mills, Detroit, Mich.  
 Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.

#### NAILERS, SHINGLING AND ROOFING.

Pearson Mfg. Co., Robbinsdale, Minn.

#### NAILS.

- ◆ American Steel & Wire Co., Chicago, Ill.
- ◆ Atlas Tack Co., Fairhaven, Mass. (wire and cut, all metals)
- ◆ Bull Dog—Kokomo Nail & Brad Co., Kokomo, Ind.
- ◆ Cambria Steel Co., Johnstown, Pa.
- ◆ Corbin Screw Corp., The, New Britain, Conn.
- ◆ Delaware Steel Co., New York.
- ◆ Economy Double Headed—F. A. Neider Co., Inc., Augusta, Ky.

- ◆ Follansbee Bros. Co., Pittsburg, Pa.
- ◆ Grammes, L. F., & Sons, Allentown, Pa.
- ◆ Hassall, John, Inc., Brooklyn, N. Y.
- ◆ Igoo Brothers, Newark, N. J. (wire)
- ◆ Interstate Iron & Steel Co., Chicago, Ill.
- ◆ J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.
- ◆ Keystone Steel & Wire Co., Peoria, Ill.
- ◆ La Belle Iron Works, Steubenville, O.
- ◆ Malleable Iron Fittings Co., Branford, Conn. (galvanized)
- ◆ Mattatuck Mfg. Co., The, Waterbury, Conn.
- ◆ Newport Rolling Mill Co., Newport, Ky.
- ◆ Northwestern Barb Wire Co., Inc., Sterling, Ill.
- ◆ Pittsburgh Perfect—Pittsburgh Steel Co., Pittsburgh, Pa.
- ◆ Reading—Reading Iron Co., Birdsboro, Pa.
- ◆ Tower Mfg. Co., Madison, Ind. (small cut).
- ◆ Townsend, C. C. & E. P., Co., New Brighton, Pa.
- ◆ Tremont (Cut) Tremont Nail Co., Boston, Mass.
- ◆ Wickwire Bros., Inc., Cortland, N. Y.
- ◆ Wilcox, Crittenden & Co., Middletown, Conn. (galvanized).
- ◆ Youngstown—Youngstown Sheet & Tube Co., Youngstown, O.

#### NAILS, BRASS AND COPPER.

- ◆ American Steel & Wire Co., Chicago, Ill.
- ◆ Atlas Tack Corp., Fairhaven, Mass.
- ◆ Clendennin Bros., Baltimore, Md.
- ◆ Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass. (yellow metal).
- ◆ Grammes, L. F., & Sons, Allentown, Pa.
- ◆ Hussey, C. G., & Co., Pittsburg, Pa.
- ◆ Interstate Iron & Steel Co., Chicago, Ill.
- ◆ Latshaw Steel & Metal Products Corp., New York, N. Y.
- ◆ Mattatuck Mfg. Co., Waterbury, Conn.
- ◆ Merchant & Evans Co., Philadelphia, Pa.
- ◆ Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.
- ◆ Taunton & New Bedford Brass & Copper Co., Taunton, Mass. (yellow metal).
- ◆ Turner & Seymour Mfg. Co., Torrington, Conn.
- ◆ Weldclad—Duplex Metals Co., Chester, Pa.

#### NAILS, COATED.

Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Pearson, J. C. Co., Inc., Boston, Mass.

#### NAILS, ROOFING.

American Casting & Mfg. Corp., Brooklyn, N. Y.  
 Hussey, C. G., & Co., Pittsburgh, Pa.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Lyon, Conklin & Co., Inc., Baltimore, Md.  
 Zincclad, Zinc City—W. H. Maze Co., Peru, Ill.

#### NAILS, SHOE, BRASS AND COPPER.

Atlas Tack Corp., Fairhaven, Mass.  
 Clendennin Bros., Inc., Baltimore, Md.  
 H. C. Tack Co., Cleveland, O.  
 Holland Mfg. Co., Baltimore, Md.  
 Rome Brass & Copper Co., Rome, N. Y.

#### NAILS AND TACKS, RUBBER HEAD.

Canfield Rubber Co., The, Bridgeport, Conn.

#### NAILS, ZINC, COATED.

Malleable Fittings Co., Branford, Conn.

#### NAME PLATES, BRONZE.

(See also "Plates, Name")

Imperial Brass Mfg. Co., Chicago, Ill.  
 Pittsburgh Stamp Co., Inc., Pittsburgh, Pa.

#### NAPHTHALENE.

- ◆ Bethlehem Steel Co., Bethlehem, Pa.

#### NEEDLES, MINERS' COPPER AND STEEL.

Howells—Howell Mining Drill Co., Plymouth, Pa.  
 Leetonia Tool Co., Leetonia, Ohio.  
 Salem Tool Co., Salem, O.

#### NICKEL AND NICKEL ALLOY RODS, STRIPS, AND WIRE.

American Smelting & Refining Co., New York, N. Y.  
 Driver-Harris Mfg. Co., Harrison, N. J.  
 Riverside Metal Co., Riverside, N. J.

#### NICKEL SILVER RODS, SHEETS, WIRE, INGOTS, ETC.

American Brass Co., Waterbury, Conn.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Bristol Brass Co., Bristol, Conn.  
 Chase Rolling Mill Co., Waterbury, Conn.  
 Columbia Smelting & Refining Works, New York, N. Y.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Eagle Smelting & Refining Works, New York, N. Y.  
 North American Copper Co., New York, N. Y.

# PIPE NIPPLES

Made from Standard and  
Extra Heavy Wrought Iron,  
Steel and Brass. Cut Pipe.

*Sharp Threads—Ends Reamed—  
Long Screws—Lock Nut Nipples*

ALSO SWEDGE AND CASING NIPPLES,  
STEAM GAUGE SYPHONS, BENDS, ETC.

**N. C. CRESSMAN COMPANY**  
PHILADELPHIA, PENN.

Omega—Riverside Metal Co., Riverside, N. J.  
Plume & Atwood Mfg. Co., Waterbury, Conn.  
Sandoval Zinc Co., Chicago, Ill.  
Seymour—Seymour Mfg. Co., The, Seymour, Conn.  
Stamford Rolling Mills Co., New York  
Star—U. T. Hungerford Brass & Copper Co., New  
York, N. Y.  
W & C—Whipple & Choate, Bridgeport, Conn.

**NIPPERS, FRICTION AND STEAM**  
(See also "Sawmill Machinery.")

Hill-Curtis Co., Kalamazoo, Mich.  
Wheland—The Wheland Co., Chattanooga, Tenn.

## NIPPERS.

Baker Cutlery & Hardware Co., Inc., New York.  
Bridgeport Hardware Co., Bridgeport, Conn.  
Champion Tool Co., Meadville, Pa.  
Heller Bros. Co., Newark, N. J.  
Irving—Irving Mfg. & Tool Co., New York, N. Y.  
Irvington Mfg. Co., Irvington, N. J.  
Kilborn & Bishop Co., New Haven, Conn.  
Milwaukee Tool & Forge Co., Milwaukee, Wis.  
Red Devil—Smith & Hemenway Co., Irvington, N. J.  
Schollhorn Co., The Wm., New Haven, Conn.  
Smith, H. D., Co., Plantville, Conn.  
Utica—Utica Drop Forge & Tool Co., Utica, N. Y.

## NIPPLES, ROSE.

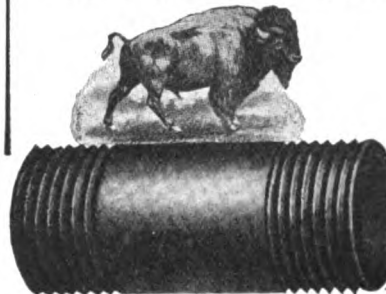
Acheson Mfg. Co., Rankin, Pa.  
Allen Fire Department Supply Co., Providence, R. I.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Bard Mfg. Co., Royersford, Pa.  
Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Burlington—Burlington Brass Works, Burlington, Wis.  
Callahan Co., The Cornelius, Boston, Mass.  
Cleco—Cleveland Pneumatic Tool Co., The, Cleveland,  
Ohio.  
Dallett—Thos. H. Dallett Co., Philadelphia, Pa.  
"D"—M. Donohue & Son, New York.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Elkhart Brass Co., Elkhart, Ind.  
Exeter Brass Works, Exeter, N. H.  
Fries & Co., Buffalo, N. Y.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
♦ Hays Mfg. Co., Erie, Pa.  
Howell, F. R., Brass Works, Philadelphia, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Jiffy—The Jiffy Fire Hose Rack Co., New York, N. Y.  
Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McNab & Harlin Mfg. Co., New York, N. Y.  
♦ McBee & Roberts Co., The, Detroit, Mich.  
♦ Mulconroy Co., Philadelphia, Pa.  
National Malleable Casting Co., Cleveland, O.  
Pioneer Brass Works, Indianapolis, Ind.  
♦ Powell, Wm., Co., The, Cincinnati, O.  
Powhatan Brass & Iron Wks., Ranson, W. Va.  
Richardson, Edro, Brass Co., Baltimore, Md.  
Roberts Brass Mfg. Co., The, Detroit, Mich.  
Schlangen Bros. Co., Chicago, Ill.  
Seattle Brass Co., Seattle, Wash.  
♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
Standard Brass & Iron, Milwaukee, Wis.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
♦ Walworth Mfg. Co., Boston, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

## NIPPLES, PIPE, BRASS.

Acheson Mfg. Co., Braddock, Pa.  
American Brass & Copper Co., New York, N. Y.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Atlantic Pipe & Nipple Co., Brooklyn, N. Y.  
Buckeye Iron & Brass Works, Dayton, O.  
Buffalo Nipple & Machine Co., Inc., Buffalo, N. Y.

## Buffalo Nipple & Machine Company, Inc.

Manufacturers of  
**HIGH GRADE IRON AND BRASS NIPPLES**



Running  
Thread Pipe  
Pipe Cutting  
to Sketch  
General  
Machine Shop  
Work

**BUFFALO,  
N. Y.**

Burlington Brass Works, Burlington, Wis.  
Campbell, Lewis, Boyertown, Pa.  
Clow & Sons, James B., Chicago, Ill.  
Cressman, W. C., Co., Philadelphia, Pa.  
Cuyler & Mohler Co., Baltimore, Md.  
"D"—M. Donohue & Son, New York.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Edna Brass Mfg. Co., Cincinnati, O.  
Exeter Brass Works, Exeter, N. H.  
Farles Mfg. Co., Decatur, Ill.  
Franklin Brass Fdy., Long Island City, N. Y.  
Fretz, S. S. Jr. & Co., Philadelphia, Pa.  
Fries & Co., Buffalo, N. Y.  
Garratt & Co., W. T., San Francisco, Cal.  
Glauber Brass Mfg. Co., Cleveland, O.  
Gwilliam Supply Co., Philadelphia, Pa.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia,  
Pa.  
Hamlin & Emery Brass Co., The, Boston, Mass.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Lunkenheimer Co., Cincinnati, O.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McNab & Harlin Mfg. Co., New York, N. Y.  
♦ McBee & Roberts Co., The, Detroit, Mich.  
Mills Brass Co., W. A., Port Chester, N. Y.  
Murdoch Mfg. & Supply Co., The, Cincinnati, O.  
New Jersey Tube Co., New York, N. Y.  
Park & McKay Co., The, Detroit, Mich.  
Peninsular Brass Works, Detroit, Mich.  
Perkes, Chas., Co., Philadelphia, Pa.  
Pipe, Nipple & Specialty Co., New York, N. Y.  
Pittsburgh Valve & Fittings Co., Barborton, O.  
♦ Powell Co., The Wm., Cincinnati, O.  
Richardson Brass Co., Edro, Baltimore, Md.  
♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
Toledo—Franklin Williams, Inc., New York, N. Y.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
♦ United—United Brass Mfg. Co., Cleveland, O.  
♦ Walworth Mfg. Co., Boston, Mass.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.

## NIPPLES, PIPE, BRASS, IRON PIPE SIZES.

Kleinman, Russell F., Philadelphia, Pa.  
Waterbury Mfg. Co., Waterbury, Conn.

## NIPPLES, PIPE, EXTRA HEAVY.

Buffalo Nipple & Machine Co., Inc., Buffalo, N. Y.  
Caldwell Mfg. & Supply Co., Pittsburgh, Pa.  
Cressman, W. C., Co., Philadelphia, Pa.  
Kleinman, Russell F., Philadelphia, Pa.  
♦ Walworth Mfg. Co., Boston, Mass.

## NIPPLES, PIPE, STEEL & WROUGHT IRON.

Atkins Mfg. Co., H. C., St. Louis, Mo.  
Atlantic Pipe & Nipple Co., Brooklyn, N. Y.  
Belfield Co., H., Philadelphia, Pa.  
Buffalo Nipple & Machine Co., Buffalo, N. Y.  
Byers—A. M. Byers Co., Pittsburgh, Pa.  
Campbell, Lewis, Boyertown, Pa.  
Chicago Nipple Mfg. Co., Chicago, Ill.  
Clark Co., The, West Newton, Pa.  
Clow, James B., & Sons, Chicago, Ill.  
Crane Valve Co., Bridgeport, Conn.  
Crawford & Co., Chicago (for gas fixtures).  
Cressman, W. C., Co., Philadelphia, Pa.  
Detroit Nipple Mfg. & Pipe Cutting Co., Detroit,  
Mich.  
Eastern Supply & Mfg. Co., Shoemakersville, Pa.  
Ford & Kendig Co., Philadelphia, Pa.  
Frank Bros., New York, N. Y.  
Fretz, S. S., Jr. & Co., Philadelphia, Pa.  
General Fire Extinguisher Co., Providence, R. I.  
Grinnell Company, Providence, R. I.  
Gwilliam Supply Co., Philadelphia, Pa.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.



# Harvey Nipples

With sharp, clean, easy starting threads and full reamed ends.

Made only from new "National" steel pipe and thoroughly cleaned.

A good stock of Harvey Nipples makes satisfied customers and holds their trade.

**A HARVEY'S SONS MFG. CO.**

Established 1855

Corner First & Woodbridge Sts., DETROIT, MICH.

**Harvey—A. Harvey's Sons Mfg. Co., Ltd., Detroit, Mich.**

- Illinois Malleable Iron Co., Chicago, Ill.**
- Iroquois Nipple Works, Buffalo, N. Y.**
- Jackwill Mfg. Co., New York, N. Y.**
- ♦ **Kelly & Jones Co., The, Greensburg, Pa.**
- Kleinman, Russell F., Philadelphia, Pa.**
- Liberty Iron Pipe & Nipple Works, New York.**
- McDowell, Small, McKibben Co., Camden, N. Y.**
- McNab & Harlin Mfg. Co., New York, N. Y.**
- New Jersey Nipple & Machine Works, Newark, N. J.**
- Pittsburgh Nipple & Mfg. Co., Pittsburgh, Pa.**
- Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.**
- Reldy Machine Screw Co., New Haven, Conn.**
- Sales, Murray, Co., Detroit, Mich.**
- Simmons Co., John, New York, N. Y.**
- Standard Nipple Co., Hamburg, Pa.**
- Standard Nipple & Tool Co., West Newton, Pa.**
- ♦ **Walworth Mfg. Co., Boston, Mass.**
- Woodrow Nipple Mfg. Co., Chicago, Ill.**

## NIPPLES, RADIATOR.

- Flagg, Stanley G., & Co., Philadelphia, Pa.**
- National Radiator Co., Johnstown, Pa.**
- Pratt Chuck Co., Frankfort, N. Y.**

## NIPPLES, SOLDERING.

- Acme—Acme Brass Works, Detroit, Mich.**
- American Brass & Copper Co., The, New York, N. Y.**
- American Foundry & Mfg. Co., St. Louis, Mo.**
- Atkinson Co., The, Rochester, N. Y.**
- Atlas Brass Mfg. Co., Cleveland, O.**
- Bridgman Bros. Co., Philadelphia, Pa.**
- Buckeye Iron & Brass Works, Dayton, O.**
- Burlington Brass Works, Burlington, Wis.**
- C—Crane Co., Chicago, Ill.**
- Clow & Sons, James B., Chicago, Ill.**
- Detroit Sanitary Supply Co., Detroit, Mich.**
- Du Bois, F. N., & Co., Inc., The, New York, N. Y.**
- Exeter Brass Works, Exeter, N. H.**
- Franklin Brass Mfg. Co., Philadelphia, Pa.**
- Frank Bros., New York, N. Y.**
- Fries & Co., Buffalo, N. Y.**
- Gardiner Metal Co., Chicago, Ill.**
- Gibson & Price Co., Cleveland, O.**
- Glauber Brass Mfg. Co., Cleveland, O.**
- Gulderland Foundry Co., Gulderland, N. Y.**
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.**
- Hamlin & Emery Brass Co., The, Boston, Mass.**
- Haydenville Co., The, Haydenville, Mass.**
- ♦ **Hays Mfg. Co., Erie, Pa.**
- Healey P., Evansville, Ind.**
- Hoffmann & Billings Mfg. Co., Milwaukee, Wis.**
- Humphryes Mfg. Co., The, Mansfield, O.**
- ♦ **Kelly & Jones Co., The, Greensburg, Pa.**
- Keystone Brass Works, Inc., Erie, Pa.**
- Kinsey & Mahler Co., Peoria, Ill.**
- Kruecke Bros. Mfg. Co., Milwaukee, Wis.**
- Lippold Valve Co., The, Erie, Pa.**
- Loyal Brass Co., Cleveland, O.**
- McDonald Mfg. Co., A. Y., Dubuque, Ia.**
- McNab & Harlin Mfg. Co., New York, N. Y.**
- Midland Standard—The Midland Brass Works, Fort Worth, Texas.**
- Mills Brass Co., W. A., Port Chester, N. Y.**
- Monarch Brass Co., The, Cleveland, O.**
- Mueller Mfg. Co., H., Decatur, Ill.**
- National Mfg. & Supply Co., Minneapolis, Minn.**
- Okay—E. Stebbins Mfg. Co., Springfield, Mass.**
- Park & McKay Co., The, Detroit, Mich.**
- Peck Bros. & Co., The, New Haven, Conn.**
- Peerless Brass Mfg. Co., The, Cleveland, O.**
- Perkes Co., Chas., Philadelphia, Pa.**
- Peru—Peru Brass & Mfg. Co., Peru, Ind.**
- Pittsburg Valve & Fittings Co., Barborton, O.**

- Powhatan Bras & Iron Wks., Ranson, W. Va.**
- Raymond Lead Co., Chicago, Ill.**
- Robertson Lead Co., James, Baltimore, Md.**
- Rockford Brass Works, Rockford, Ill.**
- Romaco—Robertshaw Mfg. Co., Youngwood, Pa.**
- Rundle Mfg. Co., Milwaukee, Wis.**
- Seattle Brass Co., Seattle, Wash.**
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.**
- Stebbins Mfg. Co., E., Springfield, Mass.**
- Sterling Specialty Co., Newcomerstown, O.**
- Street & Kent Mfg. Co., Chicago, Ill.**
- Union Brass & Metal Mfg. Co., St. Paul, Minn.**
- Union Water Meter Co., Worcester, Mass.**
- United Brass Mfg. Co., Cleveland, O.**
- United Lead Co., New York, N. Y.**
- ♦ **Walworth Mfg. Co., Boston, Mass.**
- Waterbury Mfg. Co., Waterbury, Conn.**
- Windsor Mfg. Co., Milwaukee, Wis.**
- Wolff Mfg. Co., Chicago, Ill.**
- Wolverine Brass Works, Grand Rapids, Mich.**
- Woodward-Wanger Co., Philadelphia, Pa.**
- ♦ **Youngstown Sheet & Tube Co., The, Youngstown, O.**

## NIPPLES, SWAGED, OIL WELL.

- Norris, W. C., Tulsa, Okla.**

## NIPPLES, TANK, OR LOCKNUT.

- Buffalo Nipple & Machine Co., Inc., Buffalo, N. Y.**
- Hays Mfg. Co., Erie, Pa.**
- Kelly & Jones Co., The, Greensburg, Pa.**
- Kleinman, Russell F., Philadelphia, Pa.**
- ♦ **Walworth Mfg. Co., Boston, Mass.**

## NITROGEN.

- Airco—Air Reduction Sales Co., New York, N. Y.**

## NOZZLES, BLAST, FOR CHIMNEYS.

- Schutte & Koerting Co., Philadelphia, Pa.**

## NOZZLES, BOILER.

- American Fdy. & Mfg. Co., St. Louis, Mo.**
- Horsley—Scully Steel & Iron Co., Chicago, Ill.**

## NOZZLES, CHEMICAL ENGINE.

- Elk—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Larkin—Larkin Mfg. Co., Dayton, O.**
- Peerless—The "S-C" Regulator Co., Fostoria, O.**

## NOZZLES, ROSE.

- Allen—Allen Fire Dept. Supply Co., Providence, R. I.**
- Allen, W. D., Mfg. Co., Chicago, Ill.**
- American Brass & Copper Co., The, New York, N. Y.**
- American Foundry & Mfg. Co., St. Louis, Mo.**
- American Safety Lamp & Mine Sup. Co., Scranton, Pa.**
- Ashworth—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Belfield Co., H., Philadelphia, Pa.**
- Boss—Belknap Mfg. Co., The, Bridgeport, Conn.**
- Boston Woven Hose & Rubber Co., Boston, Mass.**
- Brenan Distributing—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Bresnan—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Buckeye Iron & Brass Works, Dayton, O.**
- Buckley Rubber Co., J. W., New York, N. Y.**
- Carleton Coupling Co., Camden, Me.**
- Central, Rainbow—L. R. Nelson, Peoria, Ill.**
- Chemical—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Clay, John H., Philadelphia, Pa.**
- Cliff Perfect—Cliff & Guilbert Co., New York, N. Y.**
- ♦ **Diamond—H. B. Sherman Mfg. Co., Battle Creek, Mich.**
- Eclipse—Boston Woven Hose & Rubber Co., Cambridge, Mass.**
- Elk Chemical—Elkhart Brass Mfg. Co., Elkhart, Ind.**
- Elk Shut-Off—Elkhart Brass Mfg. Co., Elkhart, Ind.**



Essex Foundry, Newark, N. J.  
 Firemen's Pe—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Fries & Co., Buffalo, N. Y.  
 ♦ Gem—Home Rubber Co., Trenton, N. J.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Harris Fire Apparatus Co., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Hayward & Co., S. F., New York, N. Y.  
 Ideal Water Saver—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Jackson—Callahan Co., The, Cornelius, Boston, Mass.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Landers, Frary & Clark, New Britain, Conn.  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Little Monitor—L. R. Nelson, Peoria, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Magic—W. D. Allen Mfg. Co., Chicago, Ill.  
 Morse—The Cornelius Callahan Co., Boston, Mass.  
 Mystic—W. D. Allen Mfg. Co., Chicago, Ill.  
 National Water Saver—National Brass Mfg. Co., Rochester, N. Y.  
 Navy—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Peerless—The "S-C" Regulator Co., Fostoria, O.  
 Perkes Co., Charles, Philadelphia, Pa.  
 ♦ Pet—Acheson Mfg. Co., Braddock, Pa.  
 Plain—The Midland Brass Works, Fort Worth, Texas.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Rumsey's Lily—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 ♦ Sherman—E. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Standard Brass & Iron, Milwaukee, Wis.  
 Victory—Self Propelling Nozzle Co., New York, N. Y.  
 Waldron—W. D. Allen Mfg. Co., Chicago, Ill.  
 Westland—Allen Fire Dept. Supply Co., Providence.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Wolverine—Wolverine Brass Works, Grand Rapids.

**NOZZLES, ROSE, CONTROLLING.**

Binks—Binks Spray Equipment Co., Chicago, Ill.  
 Bresnam, Callahan—S. F. Hayward & Co., New York.  
 Cliff—Cliff & Guilbert Co., New York, N. Y.  
 Elk Controlling—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Foley—Loeffelholz Co., Milwaukee, Wis.  
 Invincible—Morse, Andrew, J., Son, Inc., Boston, Mass.  
 Richardson, Edro, Brass Co., Baltimore, Md.

**NOZZLES, ROSE & NIPPLE, MALLEABLE.**

Dixon Valve & Coupling Co., Philadelphia, Pa.  
 Knox Mfg. Co., Philadelphia, Pa.

**NOZZLES, HYDRANT.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Philadelphia Pipe Bending Co., Philadelphia, Pa.

**NOZZLES, HYDRAULIC MINING.**

Universal—Universal Nozzle Co., Indianapolis, Ind.

**NOZZLES, LADLE.**

McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

**NOZZLES AND SPRINKLERS, IRRIGATION.**

Skinner Irrigation Co., The, Troy, O.  
 Cornell, W. G., Co., New York City.

**NOZZLES, RECORDING.**

Koerting—Schutte & Koerting Co., Philadelphia, Pa.

**NOZZLES, ROOF (turrent or rotary).**

Universal—Universal Nozzle Co., Indianapolis, Ind.

**NOZZLES, SAND BLAST.**

Federal Malleable Co., West Allis, Wis.  
 High Pressure Sand Blast Co., New York, N. Y.  
 Hill & Griffiths Co., Cincinnati, O.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.

**NOZZLES, SPRAY.**

Allen, W. D., Mfg. Co., Chicago, Ill.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 ♦ Bordeaux, Demorel, Eureka, Simplex—The Deming Co., Salem, O.  
 Boston—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Carrier Air Conditioning Co. of America, Buffalo, N. Y.  
 C. C.—Crane Co., Chicago, Ill.  
 Comet—H. B. Rusler Mfg. Co., Johnstown, O.  
 Dalsey—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Dalsey—Schlangen Bros. Co., Chicago, Ill.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.

Fairy—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Hayward, Callahan—S. F. Hayward & Co., New York.  
 Ideal Water Saver—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Koerting—Schutte & Koerting Co., Philadelphia, Pa.  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Magio—Peters Pump Co., Kewanee, Ill.  
 Mistry—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Mistry Jr.—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 New Boston—Peters Pump Co., Kewanee, Ill.  
 Seneca—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Simplex—Uehling Instrument Co., New York, N. Y.  
 Spray Engineering Co., Boston, Mass.  
 Stanley, Jr.—Boston Woven Hose & Rubber Co., Boston, Mass.  
 Teetor, R. J. Co., Muskegon, Mich.  
 Universal Little Wonder—L. R. Nelson, Peoria, Ill.  
 Vermorel—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Yarway—Yarnall-Waring Co., Philadelphia, Pa.

**NOZZLES, SPRINKLING, FOR SEWAGE DISPOSAL WORKS.**

Columbus—The Ohio Pump & Brass Co., Columbus, O.  
 Merritt—Albert Priestman, Philadelphia, Pa.  
 Taylor—Pacific Flush Tank Co., Chicago, Ill.

**NOZZLES, STANDPIPE.**

Judge—Loeffelholz Co., Milwaukee, Wis.

**NUTS, BRASS AND BRONZE.**

Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Copper Co., The, New York, N. Y.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Atlas—Atlas Bolt & Screw Co., Cleveland, O.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Chicago Nut Co., Chicago, Ill.  
 Davis & Hemphill, Elkhridge, Md.  
 Delaware Steel Co., New York, N. Y.  
 Detroit Nut Co., Detroit, Mich.  
 Forbes Brass Co., The, Rochester, N. Y.  
 Garrison Brass & Machine Co., New York, N. Y.  
 Hartford Machine Screw Co., Hartford, Conn.  
 Haskell Mfg. Co., W. H., Pawtucket, R. I.  
 National Acme Co., The, Cleveland, O.  
 National Marine Lamp Co., Forestville, Conn.  
 New England Screw Co., Boston, Mass.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 Pheoli Mfg. Co., Chicago, Ill. (machine screw).  
 Richards, Benjamin & Co., Winsted, Conn.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 St. Louis Screw Co., St. Louis, Mo.  
 Standard Nut & Bolt Co., Valley Falls, R. I.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Waltham Appliance Co., Waltham, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Western Automatic Machine Screw Co., The, Elyria, O.  
 Western Screw Products Co., St. Louis, Mo.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**NUTS, CASE HARDENED.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Cad—Standard Shop Equipment Co., Philadelphia, Pa.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Detroit Screw Works, Detroit, Mich.  
 H. M. S.—Hartford Machine Screw Co., Hartford, Conn.  
 Haskell, Wm. H., Mfg. Co., Pawtucket, R. I.  
 Lamson & Sessions Co., Cleveland, O.  
 Milton Mfg. Co., Milton, Pa.  
 National Supply Co., Baltimore, Md.  
 Niagara Screw Co., Buffalo, N. Y.  
 Reed & Prince Mfg. Co., Worcester, Mass.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 ♦ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Upson Nut Co., Cleveland, O.  
 Western Screw Products Co., St. Louis, Mo.

**NUTS, CASTELLATED OR SLOTTED.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Chicago Screw Co., Chicago, Ill.  
 Cincinnati Screw Co., Twilight, O.  
 Columbia Nut & Bolt Co., Inc., Bridgeport, Conn.  
 Curtis Screw, The, Buffalo, N. Y.  
 Detroit Nut Co., Detroit, Mich.  
 Detroit Screw Works, Detroit, Mich.  
 H. M. S.—Hartford Machine Screw Co., Hartford, Conn.  
 Marvin & Casler Co., Canastota, N. Y.  
 Milton—Milton Mfg. Co., Milton, Pa.  
 National Supply Co., Baltimore, Md.  
 Namco—National Acme Co., The, Cleveland, O.  
 ♦ National Screw & Tack Co., Cleveland, O.

- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Western Automatic Machine Screw Co., Elvria, O.  
 Western Screw Products Co., St. Louis, Mo.

#### NUTS, CHECK OR JAM.

- Bourne-Fuller Co., The, Cleveland, O.  
 Detroit Screw Works, Detroit, Mich.  
 S. A. E.—Western Screw Products Co., St. Louis, Mo.  
 St. Louis Screw Co., St. Louis, Mo.

#### NUTS, COLD PUNCHED.

- American Equipment Co., Norristown, Pa.  
 American Screw Co., Providence, R. I.  
 Anthony Screw Co., Worcester, Mass.  
 Atlas—The Atlas Bolt & Screw Co., Cleveland, O.  
 ◆ Bethlehem Steel Co., Bethlehem, Pa.  
 Bourne-Fuller Co., The, Cleveland, O.  
 Buffalo Bolt Co., Buffalo, N. Y.  
 Chicago Nut Co., Chicago, Ill.  
 Chicago Screw Co., The, Chicago, Ill.  
 ◆ Clark Bros. Bolt Co., Milldale, Conn.  
 Columbus Bolt Works Co., Columbus, O.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Delaware Steel Co., New York, N. Y.  
 Detroit Screw Works, Detroit, Mich.  
 Eastern Bolt & Nut Co., Providence, R. I.  
 Falls Rivet Co., Kent, O.  
 Fischer & Hayes Rope & Steel Corp., Chicago, Ill.  
 Gary Screw & Bolt Co., Chicago, Ill.  
 Garland Nut & Rivet Co., West Pittsburgh, Pa.  
 ◆ Graham Nut Co., Pittsburgh, Pa.  
 Haskell Mfg. Co., William H., Pawtucket, R. I.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Kirk-Latty Mfg. Co., Cleveland, O.  
 ◆ Lake Erie Bolt & Nut Co., Cleveland, O.  
 ◆ Lamson & Sessions Co., The, Cleveland, O.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 Milton Mfg. Co., Milton, Pa.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 National Supply Co., Baltimore, Md.  
 ◆ Neely Nut & Bolt Co., Pittsburgh, Pa.  
 ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
 ◆ Republic Iron & Steel Co., Youngstown, O.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 Standard Nut & Bolt Co., Valley Falls, R. I.  
 Stephens Nut & Bolt Co., Central Falls, R. I.  
 Texas Rolling Mill Co., Fort Worth, Tex.  
 Topping Bros., New York, N. Y.

#### NUTS, COUPLING, WATER CLOSET.

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Haydenville Co., Haydenville, Mass.  
 McCormick Mfg. Co., Dayton, O.  
 Park & McKay, Detroit, Mich.  
 Perkes, Chas., Philadelphia, Pa.  
 Trenton Brass & Machine Co., Trenton, N. J.  
 Waterbury Mfg. Co., Waterbury, Conn.

#### NUTS, FINISHED AND SEMI-FINISHED.

- Anthony Screw Co., Worcester, Mass.  
 ◆ Bethlehem Steel Co., South Bethlehem, Pa.  
 ◆ Bourne-Fuller Co., The, Cleveland, O.  
 Chicago Nut Co., Chicago, Ill.  
 Chicago Screw Co., Chicago, Ill.  
 Columbia—Columbia Nut & Bolt Co., Bridgeport, Conn.  
 Columbus Bolt Co., Columbus, O.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Curtis, Screw, The, Buffalo, N. Y.  
 Detroit Nut Co., Detroit, Mich.  
 Detroit Screw Works, Detroit, Mich.  
 ◆ Eclipse—Russell Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 ◆ Garland Mfg. Co., Pittsburgh, Pa.  
 Gary Screw & Bolt Co., Chicago, Ill.  
 ◆ Graham Nut Co., Pittsburgh, Pa.  
 H. M. S.—Hartford Machine Screw Co., Hartford, Conn.  
 Haskell Mfg. Co., William H., Pawtucket, R. I.  
 ◆ Lake Erie Bolt & Nut Co., Cleveland, Ohio.  
 Milton Mfg. Co., Milton, Pa.  
 ◆ National Screw & Tack Co., Cleveland, O.  
 National Supply Co., Baltimore, Md.  
 ◆ Neely Nut & Bolt Co., Pittsburgh, Pa.  
 Niagara Screw Co., Buffalo, N. Y.  
 Perfection—Foster Bolt & Nut Mfg. Co., Cleveland, Ohio.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 St. Louis Screw Co., St. Louis, Mo.  
 Topping Bros., New York, N. Y.  
 Western Automatic Machine Screw Co., Elvria, O.  
 Western Screw Products Co., St. Louis, Mo.

#### NUTS, FORGED.

- ◆ Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
 ◆ Neesley Nut & Bolt Co., Pittsburgh, Pa.

#### NUTS, HOT PRESSED.

- ◆ American Bolt Co., Birmingham, Ala.  
 American Equipment Co., Norristown, Pa.  
 Ames, W. & Co., Jersey City, N. J.  
 Bayonne Bolt & Nut Co., Bayonne, N. J.  
 ◆ Bethlehem Steel Co., Bethlehem, Pa.  
 Buffalo Bolt Co., Buffalo, N. Y.  
 Columbus Bolt Works Co., Columbus, O.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Falls Rivet Co., Kent, Ohio.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Gary Screw & Bolt Co., Chicago, Ill.  
 ◆ Graham Nut Co., Pittsburgh, Pa.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Kansas City Bolt & Nut Co., Sheffield, Mo.  
 ◆ Lake Erie Bolt & Nut Co., Cleveland, O.  
 ◆ Lamson & Sessions Co., Cleveland, O.  
 Lanman, E. B., Co., East Chicago, Ind.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 Milton Mfg. Co., Milton, Pa.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 National Supply Co., Baltimore, Md.  
 ◆ Neely Nut & Bolt Co., Pittsburgh, Pa.  
 ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pawtucket Mfg. Co., Pawtucket, R. I.  
 ◆ Russell Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 Topping Bros., New York, N. Y.  
 ◆ Upson Nut Co., The, Cleveland, O. (square and hex.)

#### NUTS, LEATHER.

- Best Leather Nut Co., Stoneham, Mass.

#### NUTS, LOCK.

(See "Locknuts.")

- Alligator—Patterson Lock Nut Mfg. Co., Chicago, Ill.  
 Grip Lock Nuts—Grip Nut Co., Chicago, Ill.  
 Mansfield Lock Washer Co., Mansfield, O.  
 Stevenson—The Safety Nut & Bolt Co., Cleveland, O.  
 U. S. Lock Nut Corp., Chicago, Ill.

#### NUTS, SELF JOINT.

- American Brass Novelty Co., Grand Haven, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 ◆ Bethlehem Steel Co., South Bethlehem, Pa.  
 Exeter Brass Works, Exeter, N. H.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Hays Mfg. Co., Erie, Pa.  
 Little, M. S., Mfg. Co., Hartford, Conn.  
 Loyal Brass Co., Cleveland, O.  
 New Jersey Tube Co., New York.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Seattle Brass Co., Seattle, Wash.  
 Speakman Co., Wilmington, Del.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### NUTS, STEEL.

- Chicago Nut Co., Chicago, Ill.  
 Davis & Hemphill, Elkridge, Md.  
 Detroit Nut Co., Detroit, Mich.  
 ◆ Lake Erie Bolt & Nut Co., Cleveland, Ohio.  
 ◆ Lamson & Sessions Co., The, Cleveland, O.  
 ◆ National-Acme Mfg. Co., Cleveland, O.  
 ◆ Neely Nut & Bolt Co., Pittsburgh, Pa.

#### NUTS AND SCREWS, THUMB AND WING.

- Beesley & Co., Chas. H., Chicago, Ill.  
 ◆ Bethlehem Steel Co., South Bethlehem, Pa.  
 Billings & Spencer Co., Hartford, Conn.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Chapin-Stephens Co., The, Pine Meadow, Conn.  
 Chicago Nut Co., Chicago, Ill.  
 Chicago Screw Co., Chicago, Ill.  
 Cleveland Wrought Products Co., Cleveland, O.  
 Detroit Screw Works, Detroit, Mich.  
 Devlin, Thos. Mfg. Co., Philadelphia, Pa.  
 Falls Rivet Co., Kent, Ohio.  
 ◆ Garland Mfg. Co., West Pittsburgh, Pa.  
 Haskell Mfg. Co., William H., Pawtucket, R. I.  
 Keystone Drop Forge Works, Chester, Pa.  
 ◆ Lamson & Sessions Co., The, Cleveland, O.  
 ◆ McKee & Roberts Co., The, Detroit, Mich.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 ◆ National Screw & Tack Co., Cleveland, O.  
 ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pheoll Mfg. Co., Chicago, Ill.  
 Philadelphia Machine Screw Works, Philadelphia, Pa.  
 Pratt, Wm. E., Mfg. Co., Chicago, Ill.  
 Reed Prince Mfg. Co., Worcester, Mass.  
 Rochester Machine Screw Co., Rochester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Vandegrift & Morris, Shelbyville, Ind.  
 Victor Tool & Mfg. Co., Chicago, Ill.

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The only firm making every grade of Oakum.  
The largest producers of Oakum in the world.

ESTABLISHED 1860.

170 CORNELISON AVE., JERSEY CITY, N. J.

Welch, T. F., & Co., Boston, Mass.  
Western Automatic Machine Screw Co., The, Elyria, O.  
♦ Whitman & Barnes Mfg. Co., Akron, O.  
♦ Williams & Co., J. H., Brooklyn, N. Y.

## NUTS, WASTE.

Kelly & Jones Co., The, Greensburg, Pa.  
♦ Walworth Mfg. Co., Boston, Mass.

## OAKUM, FELT.

Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
♦ Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.

## OAKUM, MARINE.

American—St. Louis Cordage Mills, St. Louis, Mo.  
AquaJirte—The American Mfg. Co., Brooklyn, N. Y.  
Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.  
Central Rope Mfg. Co., Brooklyn, N. Y.  
Davey & Sons, W. O., Jersey City, N. J.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
Mayflower—Hooven & Allison Co., Xenia, Ohio.  
♦ Stratford Oakum Co., Geo., Jersey City, N. J.  
Woolford, N. B., Oakum Co., Baltimore, Md.

## OAKUM, PLUMBERS.

Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.  
Bishop, Robert, & Mfg. Co., Boston, Mass.  
Clover Brand—Frank W. Winne & Son, Philadelphia, Pa.  
Davey, W. O., & Sons, Jersey City, N. J.  
Eagle—The American Mfg. Co., Brooklyn, New York.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
♦ G. S. O. Co.—Geo. Stratford Oakum Co., Jersey City.  
Hoffman-Corr Mfg. Co., New York, N. Y.  
H. & A.—Hooven & Allison Co., Xenia, Ohio.  
Royal—St. Louis Cordage Mills, St. Louis, Mo.  
♦ Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.  
Woolford, N. B., Oakum Co., Baltimore, Md.

## OAKUM, ROPE.

American Mfg. Co., The, Brooklyn, New York, N. Y.  
Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.  
Davey, W. O., & Sons, Jersey City, N. J.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
♦ Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.

## OAKUM, SPUN.

Davey, W. O., & Sons, Jersey City, N. J.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
St. Louis Cordage Mills, St. Louis, Mo.  
♦ Stratford—Geo. Stratford Oakum Co., Jersey City, N. J.

ODOMETERS (Mileage Recorders and Cyclometers).  
Veeder—Veeder Mfg. Co., Hartford, Conn.

## OFFSETS, BRASS.

Frost Mfg. Co., The, Kenosha, Wis.

OFFSETS, BRASS, PYRALIN COVERED.  
Church Mfg. Co., C. F., Holyoke, Mass.

OFFSETS, TRAP SWIVEL.  
Powers Mfg. Co., J. P., Ossining, N. Y.

## ONCEMETERS.

Roller Smith—Roller-Smith Co., New York, N. Y.  
Weston—Weston Electrical Instrument Co., Newark, N. J.

## OIL CIRCULATING AND FILTERING SYSTEMS FOR ENGINES.

Bowser, S. F., & Co., Fort Wayne, Ind.

## OIL, CORE.

(See "Compounds and Oils, Core.")

## OILS, CUTTING.

(See "Compounds, Cutting.")

## OIL, CYLINDER.

American—American Oil Corp., Jackson, Mich.  
Astral—D. A., Stuart & Co., Chicago, Ill.  
Autocrat, Diamond, Wayne—Bayerson Oil Works, Erie, Pa.  
Black Diamond—Enterprise Oil Co., Buffalo, N. Y.  
Blake & Co., W. L., Portland, Me.  
Buck & Co., E. A., Willimantic, Conn.  
Capitol—Standard Oil Co., New York, N. Y.  
Chelsea—Chelsea Oil & Supply Co., New York, N. Y.  
Cranes—James W. Crane Co., Inc., Brooklyn, N. Y.  
Dearborn—Dearborn Chemical Co., Chicago, Ill.  
En-Ar-Co—National Refining Co., Cleveland, O.  
Fiske's, Magic—Fiske Brothers Refining Co., New York, N. Y.  
Franklin—Franklin Oil & Gas Co., Bedford, O.  
Great Western Oil Co., Cleveland, O.  
Harris Jumbo—A. W. Harris Oil Co., Providence, R. I.  
Havoline—Indian Refining Co., Inc., New York, N. Y.  
Improved—Inter-Ocean Oil Co., Chicago, Ill.  
Indian Refining Co., Inc., New York.  
Moore Oil Co., The, Cincinnati, O.  
Motorol—New York & New Jersey Lubricant Co., New York, N. Y.  
Oilzum—White & Bagley Co., Worcester, Mass.  
Panhard—Panhard Oil Corp., New York, N. Y.  
Perfection—W. J. Kramer Oil Co., Milwaukee, Wis.  
Powero—Enterprise Oil Co., Buffalo, N. Y.  
Primus—Penn Petroleum & Supply Co., Philadelphia.  
Quaker State—Phinney Bros. Co., Oil City, Pa.  
Quaker State—The Star Oil Co., Chicago, Ill.  
600—D. A. Stuart & Co., Chicago, Ill.  
Stiles—Zero Oil Co., Parkersburg, W. Va.  
Superba—Curry Bros. Oil Co., Boston, Mass.  
Superia—Standard Oil Co. of New York, New York, N. Y.  
Supreme—English Chemical Co., Chicago, Ill.  
Texaco—The Texas Co., New York, N. Y.  
Unity—Curry Bros. Oil Co., Boston, Mass.  
Vim—E. F. Houghton & Co., Philadelphia, Pa.  
Whiz—Hollingshead Co., R. M., Camden, N. J.

## OIL, DYNAMO.

American—American Oil Corp., Jackson, Mich.  
Atlas—Swan & Finch Co., New York.  
Great Western Oil Co., The, Cleveland, O.  
Harris Electric—A. W. Harris Oil Co., Providence, R. I.  
Indian Refining Co., Inc., New York.  
Quaker State—Phinney Bros. Co., Oil City, Pa.  
Quaker State—The Star Oil Co., Chicago, Ill.  
I. X. L.—W. J. Kramer Oil Co., Milwaukee, Wis.

## OIL, ILLUMINATING.

American Oil Works, Titusville, Pa.  
Atlantic Refining Co., Philadelphia, Pa.  
Four Bros. Independent Oil Co., Albany, N. Y.  
Germania Refining Co., Ltd., Oil City, Pa.  
Indian Refining Co., Inc., New York, N. Y.  
Miller's, A. D., Sons Co., Pittsburgh, Pa.  
Paragon Refining Co., Toledo, O.  
Perfection—Galena Signal Oil Co., Franklin, Pa.  
Standard Oil Co. of New York, N. Y.  
Texas Co., The Railroad Dept., Houston, Tex.  
Warren Refining Co., Warren, Pa.

## OIL, LINSEED.

Cincinnati Oil Works Co., Cincinnati, O.  
Dutch Boy—National Lead Co., New York, N. Y.  
Sero—Sero Specialty Co., Cleveland, Ohio.  
World Refining Co., Easton, Pa.

## OIL, LINSEED SUBSTITUTE.

Sero—Sero Specialty Co., Cleveland, O.

## OIL, LUBRICATING.

(See also "Lubricants.")

Acorn—Corning Oil Co., Inc., New York, N. Y.  
Aeroline—Chicago Pneumatic Tool Co., New York.  
♦ Albany—Albany Lubricating Co., New York, N. Y.  
♦ Albany—Adam Cook's Sons, New York, N. Y.  
American—American Oil Corp., Jackson, Mich.  
Apolline—Acme Refining Co., The, Cleveland, O.  
Atkinson's—Economy Lubricating Co., Boston, Mass.  
Atlas—Swan & Finch Co., New York, N. Y.  
Autocrat Parolene—Bayerson Oil Works, Erie, Pa.  
Autoline—Wm. C. Robinson & Son Co., Baltimore, Md.  
Besly Solid—Charles H. Besly & Co., Chicago, Ill.  
Blake Co., W. L., Portland, Me.  
Blake, H. A., & Son, Cheboygan, Mich.  
Blue Ribbon—International Metal Polish Co., Indianapolis, Ind.

Buck's Best Auto—E. A. Buck & Co., Willimantic, Conn.  
 Buffalo Oil & Compound Co., Buffalo, N. Y.  
 Cascade—Swan & Finch Co., New York, N. Y.  
 Chard & Howe, New York, N. Y.  
 Chelsea—Chelsea Oil & Supply Co., New York, N. Y.  
 Cincinnati Oil Works Co., The, Cincinnati.  
 Climax—Daniel Mahoney & Sons, Commercial Oil Co., Buffalo, N. Y.  
 Clipper, 650 Z, Sultana—The Moore Oil Co., Cincinnati, Ohio.  
 Commodore—Wm. P. Miller Co., Brooklyn, N. Y.  
 Consomolubric—E. F. Houghton & Co., Philadelphia, Pa.  
 Crane's—James W. Crane Co., Inc., Brooklyn, N. Y.  
 Das-Co—D. A. Stuart & Co., Chicago, Ill.  
 Duplex—Enterprise Oil Co., Buffalo, N. Y.  
 Dyno—Platt & Washburn Refining Co., New York, N. Y.  
 Economy Oil & Compound Co., Chicago, Ill.  
 Economy—White & Bagley Co., The, Worcester, Mass.  
 Electric—D. A. Stuart & Co., Chicago, Ill.  
 Endurance—Endurance Auto Oil Co., Muncie, Ind.  
 Ensign Refining Co., The, Cleveland, O.  
 Enterprise—Enterprise Oil Co., Buffalo, N. Y.  
 Excelsior—E. K. Kellogg & Co., New York, N. Y.  
 Fine—D. A. Stuart & Co., Chicago, Ill.  
 Fiske's, Climax—Fiske Brothers Refining Co., New York, N. Y.  
 Franklin—Franklin Oil & Gas Co., Bedford, O.  
 Gargoyle, Gargoyle Mobiloids—Vacuum Oil Co., New York, N. Y.  
 Garnet Process—The Garnet Co., Allentown, Pa.  
 Galena—Galena Signal Oil Co., Franklin, Pa.  
 Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.  
 Glycerol—The Star Oil Co., Chicago, Ill.  
 Great Western Oil Co., The, Cleveland, O.  
 Gulf Refining Co., Pittsburgh, Pa.  
 Harris—A. W. Harris Oil Co., Providence, R. I.  
 Havoline—Indian Refining Co., Inc., New York, N. Y.  
 Houghton's Motor Oil—E. F. Houghton & Co., Philadelphia, Pa.  
 Imp—Rath Mfg. Co., Inc., Philadelphia, Pa.  
 Improved H. V. Turbine Oil—Inter-Ocean Oil Co., Chicago, Ill.  
 Indian Kenning Co., New York, N. Y.  
 I. X. L.—W. J. Kramer Oil Co., Milwaukee, Wis.  
 Keystone—Keystone Lubricating Co., Philadelphia.  
 Keystone Oil & Mfg. Co., Chicago, Ill.  
 Lubriko—Commercial Lubricating Co., Philadelphia.  
 Lubrioll—Moon Specialty Co., New York, N. Y.  
 Magic—Fiske Brother Refining Co., New York, N. Y.  
 Mars—The Star Oil Co., Chicago, Ill.  
 Mervolin—Albany Belting & Supply Co., Albany, N. Y.  
 Mobiloid—Vacuum Oil Co., Rochester, N. Y.  
 Monarch Mfg. Co., Council Bluffs, Ia.  
 Mone Oil Co., The, Cincinnati, O.  
 Monogram—New York Lubricating Oil Co., New York, N. Y.  
 Moore Oil Refining Co., Cincinnati, O.  
 Mo-to-Rol—New York & New Jersey Lubricating Co., New York, N. Y.  
 Motul (for automobile)—Swan & Finch Co., New York, N. Y.  
 N. F. O.—New York & New Jersey Lubricating Co., New York, N. Y.  
 National Refining Co., The, Cleveland, O.  
 No. 28—D. A. Stuart & Co., Chicago, Ill.  
 Nun-better—S. W. Davis Oil Co., Providence, R. I.  
 Ohio Grease Co., The, Loudonville, O.  
 Oildag—Acheson Graphite Co., Niagara Falls, N. Y.  
 Oilzum—White & Bagley Co., Worcester, Mass.  
 Oklahoma Producing & Refining Corporation of America, Muskogee, Okla.  
 Panhard—Panhard Oil Corp., New York, N. Y.  
 Paramount—William T. Baker, Inc., Jersey City, N. J.  
 P. L. C.—Patterson Lubricating Co., Boston, Mass.  
 Primus—Penn Petroleum & Supply Co., Philadelphia.  
 Polarine—Standard Oil Co., New York, N. Y.  
 Quaker State—Phinney Bros. Co., Oil City, Pa.  
 Quaker State—The Star Oil Co., Chicago, Ill.  
 Red—D. A. Stuart & Co., Chicago, Ill.  
 Red—The Star Oil Co., Chicago, Ill.  
 Red Seal—Cherry Chemical Co., Philadelphia, Pa.  
 Robsoco—Wm. C. Robinson & Son Co., Baltimore, Md.  
 Rock Brand—Magie Bros., Chicago, Ill.  
 Ruby—D. A. Stuart & Co., Chicago, Ill.  
 Run-Better—Providence Oil Co., Providence, R. I.  
 Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.  
 Star, Jupiter, Saturn, Royal, Mars, Venus, Golden, Quaker State.  
 Signet Oil—Russia Cement Co., Gloucester, Mass.  
 S. K. F.—S. K. F. Ball Bearing Co., New York.  
 Slo-Flo—Swan & Finch Co., New York, N. Y.  
 Sonneborn Sons, Inc., L., New York, N. Y.  
 Star Oil Co., The, Chicago, Ill. Trade names—Comet Star, Jupiter, Saturn, Royal, Mars, Venus.  
 Superba—Curry Bros. Oil Co., Boston, Mass.  
 Superla—Standard Oil Co., Chicago, Ill.  
 Swan & Finch Co., New York. Trade names—Crown, Bayway, Excelsior, Eagle, Victory.

Swastika—McLean-Jones Oil & Supply Co., Inc., Boston, Mass.  
 Texaco—The Texas Co., New York, N. Y.  
 Textul (for textile mach'y)—Swan & Finch Co., New York, N. Y.  
 Three-in-One—Three In One Oil Co., New York, N. Y. (light).  
 Tractorline—Wm. C. Robinson & Son Co., Baltimore, Md.  
 Tripprocess—The Garnet Co., Allentown, Pa.  
 Union Oil Works, Erie, Pa.  
 Valvoline—Valvoline Oil Co., New York, N. Y.  
 Veedol—Tide Water Oil Co., New York, N. Y.  
 Waverly—Waverly Oil Works Co., Pittsburgh, Pa.  
 Whiz—Hollingshead Co., R. M., Camden, N. J.  
 Williams, R. A. & M. L., Cleveland, O.  
 Winn, W. R., Co., New York, N. Y.  
 Wolf's Head, Packard, Maxwell—Wolverine Lubricants Co., New York.  
 World Refining Co., The, Easton, Pa.  
 Zero—Yucatan—D. A. Stuart & Co., Chicago, Ill.  
 Zero—Daniel Mahoney & Sons, Commercial Oil Co., Buffalo, N. Y.  
 Zero—Zero Oil Co., Parkersburg, W. Va. (Natural furniture, rubbing, ice machine and press).  
 Zibell, J. A., Co., New York, N. Y.

#### OIL, PAINTING.

Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.  
 Linotung—Linotung—The Garnet Co., Allentown, Pa.  
 Primus—Penn Petroleum & Supply Co., Philadelphia.

#### OILS, QUENCHING.

A-A—Bell & Gossett Co., Chicago, Ill.  
 Frontier—Frontier Mfg. Co., North Tonawanda, N. Y.

#### OIL RECLAIMING SYSTEMS, CUTTING OIL.

Bowser, S. F., & Co., Fort Wayne, Ind.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

#### OIL, SCREW CUTTING.

(See also "Compounds, Drilling," etc.)

American—American Oil Corp., Jackson, Mich.  
 Bakers Standard Lard—Wm. T. Baker, Inc., Jersey City, N. J.  
 Buck & Co., E. A., Willimantic, Conn.  
 Curry Bros. Oil Co., Boston, Mass.  
 Dasco—D. A. Stuart & Co., Chicago, Ill.  
 Emulso—Bayerson Oil Works, Erie, Pa.  
 Ex-el-ard—Buffalo Specialty Co., Buffalo, N. Y.  
 Ex-el-ard, Hosmer—G. A. Hosmer Co., Buffalo, N. Y.  
 Fiske's—Fiske Brothers Refining Co., New York.  
 Frontier—Frontier Mfg. Co., North Tonawanda, N. Y.  
 Harris—Harris Oil Co., A. W., Providence, R. I.  
 Houghton's Mineralized Fileline—E. F. Houghton & Co., Philadelphia, Pa.  
 Magic—Fiske Brothers Refining Co., Pittsburgh, Pa.  
 Panhard—Panhard Oil Corp., New York, N. Y.  
 Primus Soluble, Primus Petro Lard—Penn Petroleum & Supply Co., Philadelphia, Pa.  
 Standard—Standard Chemical Corp., Kalamazoo, Mich.  
 Sun Company, Philadelphia, Pa.  
 Tuloyl—American Agramid Corp., Flushing, N. Y.  
 Waverly—Waverly Oil Works Co., Pittsburgh, Pa.  
 World Refining Co., The, Easton, Pa.

#### OIL, SOLUBLE.

Tuloyl—American Agramid Corp., Flushing, N. Y.

#### OIL, TEMPERING.

Harris—A. W. Harris Oil Co., Providence, R. I.  
 Houghton & Co., E. F., Philadelphia, Pa.  
 Indian Refining Co., New York, N. Y.  
 Primus—Penn Petroleum & Supply Co., Philadelphia.  
 Sonneborn Sons, Inc., L., New York.

#### OIL, VALVE.

Blake & Co., W. L., Portland, Me.  
 Franklin—Franklin Oil & Gas Co., Bedford, O.  
 Galena Signal Oil Co., Franklin, Pa.  
 Great Western Oil Co., The, Cleveland, O.  
 Harris—A. W. Harris Oil Co., Providence, R. I.  
 Indian Refining Co., New York, N. Y.  
 Primus—Penn Petroleum & Supply Co., Philadelphia.

#### OILERS, CAR WHEEL.

Newton—Wolf Safety Lamp Co. of America, Inc., Brooklyn, N. Y.

#### OILERS, COPPERIZED STEEL.

Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
 National—The Whitaker Mfg. Co., Chicago, Ill.  
 Wall, P., Mfg. & Supply Co., Pittsburgh, Pa.

#### OILERS, CRANK PIN.

American—American Lubricator Co., Detroit, Mich.  
 Brownie—Michigan Lubricator Co., Detroit, Mich.

Essex Brass Corp., Detroit, Mich.  
 Hall—Hall Mfg. Co., Harrison, N. J.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Moak Machine & Tool Co., Port Huron, Mich.  
 Nathan Mfg. Co., New York, N. Y.  
 Never Fall—The Swift Lubricator Co., Elmira, N. Y.  
 Nugent Wm. & Co., Chicago, Ill.  
 Ohio—The Ohio Injector Co., Wadsworth, O.  
 ♦ Farole, Pinnacle, Planet, Pluto, Pointer, Polaris—The Wm. Powell Co., Cincinnati, O.  
 ♦ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.  
 Teleconic—Wm. W. Nugent & Co., Chicago, Ill.  
 United Brass & Aluminum Mfg. Co., Port Huron, Mich.

**OILERS, CROSS HEAD.**

American—American Lubricator Co., Detroit, Mich.  
 Anti-Packed Telescopic—Wm. W. Nugent & Co., Chicago, Ill.  
 Essex Brass Corp., Detroit, Mich.  
 Hall—Hall Mfg. Co., Harrison, N. J.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Nathan Mfg. Co., New York, N. Y.  
 Nugent—Wm. W. Nugent & Co., Chicago, Ill.  
 ♦ Penguin, Phoenix, Petrel—The Wm. Powell Co., Cincinnati, O.

**OILERS, CYLINDER.**

Essex Brass Corp., Detroit, Mich.  
 Locke—Locke Regulator Co., Salem, Mass.  
 ♦ Picket—The Wm. Powell Co., Cincinnati, O.  
 ♦ Pilgrim—The Wm. Powell Co., Cincinnati, O.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y. Trade names—  
 Hart Force Sight Feed, Felthousen Hand Pump,  
 Buffalo Glass Body Pump.  
 D. A. Stuart & Co., Chicago, Ill.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wilcox Oiler & Wiper—E. A. Wilcox Mfg. Co., Chicago.

**OILERS, ENGINEERS', BENCH AND MACHINISTS'.**

(See also "Sets, Engineers' Oiling.")

Acme—Trethaway Bros., Parsons, Pa.  
 All-Way—Famasco Distributing Co., Buffalo, N. Y. (flexible spout).  
 Aycock—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Beacon—Moors-Wright Co., New York (flexible spout).  
 Cannon—The Cannon Oiler Co., Keithsburg, Ill.  
 Deverall's—Deverall Perfection Mfg. Co., Brooklyn.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Dover-Flexo—Dover Stamping & Mfg. Co., Cambridge, Mass.  
 Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
 Etna—McClintock & Irvine Co., The, Pittsburgh, Pa.  
 ♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
 G. & L.—Gustave Lidsen Co., Chicago, Ill.  
 Howland—Maple City Mfg. Co., Monmouth, Ill.  
 Huebel Mfg. Co., Newark, N. J.  
 J—Johnson Mfg. Co., Urbana, O.  
 Knapp Mfg. Co., New York, N. Y.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Malleable Iron Fittings Co., Branford, Conn.  
 Manhattan Brass Co., New York, N. Y.  
 Maple City—Maple City Mfg. Co., Monmouth, Ill.  
 Maurer Bros., Brooklyn, N. Y.  
 Noero Mfg. Co., The, Waterbury, Conn.  
 Richard—The Ansonia Novelty Co., Ansonia, Conn.  
 Star—Hungerford Brass & Copper Co., New York.  
 Steel & Tube Co. of America, Chicago, Ill.  
 Union Hardware Co., Torrington, Conn.  
 Vogel, Wm., & Bros., Brooklyn, N. Y.  
 Wall Mfg. Supply Co., The P., Pittsburgh, Pa.  
 Walters—Walters Mfg. Co., Pittsburgh, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Western Tinware Co., St. Louis, Mo.  
 Whitaker Mfg. Co., The, Chicago, Ill.  
 Will—The Will Mfg. Co., Chicago, Ill.

**OILERS, FLANGE.**

Detroit Lubricator Co., Detroit, Mich.

**OILERS, GLASS.**

(See Cups, Oil.)

♦ Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.  
 Essex Brass Corp., Detroit, Mich.

**OILERS, LOOSE PULLEY.**

American—American Lubricator Co., Detroit, Mich.  
 Brown—Brown Engineering Co., Reading, Pa.  
 Graves—The Butler Chuck Co., Greenfield, Mass.  
 Hodge's—McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Oil First—Biggar Brothers, Oneida, N. Y.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 20th Century—American Specialty Co., Chicago, Ill.  
 Vanduzen Co., The E. W., Cincinnati, O.

# WALTERS

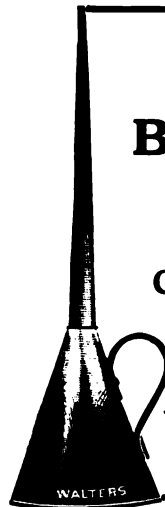
## Brazed Steel OILERS

Cannot be broken or melted

Write for Sample  
and Catalog

Walters Manufacturing Co.

Fulton Building, Pittsburgh, Pa.

**OILERS, MOWING MACHINE.**

Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
 ♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Noera—Noera Mfg. Co., Waterbury, Conn.

**OILERS, MULTIPLE.**

American—American Lubricator Co., Detroit, Mich.  
 Bartow—Hall Mfg. Co., Harrison, N. J.  
 Commonwealth Brass Corp., Detroit, Mich.  
 ♦ Detroit Lubricator Co., Detroit, Mich.  
 Essex Brass Corp., Detroit, Mich.  
 Hall Mfg. Co., New York, N. Y.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 ♦ Michigan—Michigan Lubricator Co., Detroit, Mich.  
 Nathan Mfg. Co., New York, N. Y.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 R. P.—Richardson Phenix Co., Milwaukee, Wis.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y.

**OILERS, PNEUMATIC TOOL.**

Little Giant—Chicago Pneumatic Tool Co., New York, N. Y.

**OILERS, PUMP.**

Cannon Oiler—The Cannon Oiler Co., Keithsburg, Ill.  
 Forzoi—Anthes Force Oiler Co., Ft. Madison, Ia.  
 G. L.—Gustave Lidsen Co., Chicago, Ill.  
 Howland—Maple City Mfg. Co., Monmouth, Ill.  
 Noera Mfg. Co., Waterbury, Conn.

**OILERS AND WIPERS, PISTON ROD.**

Wilcox—E. A. Wilcox Mfg. Co., Chicago, Ill.

**OILERS, SIGHT FEED.**

♦ American Injector Co., Detroit, Mich.  
 Admiral—American Lubricator Co., Detroit, Mich.  
 American—American Lubricator Co., Detroit, Mich.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Essex Brass Corp., Detroit, Mich.  
 Field—American Lubricator Co., Detroit, Mich.  
 Guillott Metal Gasket & Supply Co., Chicago, Ill.  
 Lee—The Wm. O. Lee Co., Port Huron, Mich.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Nathan Mfg. Co., New York, N. Y.  
 Nugent—Wm. W. Nugent & Co., Chicago, Ill.  
 ♦ Picket—The Wm. Powell Co., Cincinnati, O.  
 ♦ Puritan—The Wm. Powell Co., Cincinnati, O.  
 Richardson—The Richardson-Phenix Co., Milwaukee.  
 ♦ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.  
 ♦ Signal—The Wm. Powell Co., Cincinnati, O.  
 ♦ Sprite—Michigan—Michigan Lubricator Co., Detroit, Mich.  
 White—American Lubricator Co., Detroit, Mich.

**OILERS, TELESCOPIC.**

Nugent, Wm., & Co., Chicago, Ill.  
 R. P.—Richardson Phenix Co., Milwaukee, Wis.

**OILERS, WICK FEED.**

Van—Alsteel Mfg. Co., Battle Creek, Mich.

**OILSTONES.**

American—American Emery Wheel Works, Providence, R. I.  
 ♦ Carborundum Company, The, Niagara Falls, N. Y.  
 Crawford Oilstone Works, Crawford, N. J.  
 Eagle—Eagle Emery & Corundum Wheel Co., Chicago.  
 Gem—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 India, Arkansas, Washita—Pike Mfg. Co., Pike, N. H.  
 Keen Edge—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 "Made of Carborundum"—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Scranton Whetstone & Abrasive Co., The, Scranton, Pa. Trade names—Forget-Me-Not, Green Turtle, Ideal, Quick-Cut, Red Cloud, Hard Arkansas, Hindostan, Sandstone, Washita.  
 Vitrified Wheel Co., Westfield, Mass.

**OPENERS, BOX.**

Bonner Mfg. Co., C. E. Chrisman, Ill.  
 Buffum Tool Co., Louisiana, Mo.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Harold Tool & Forge Co., Columbiana, Ohio.  
 Kilborn-Bishop Co., New Haven, Conn.  
 Iroquois, 20th Century, Matchless Box Terrier, Seminole, Tomahawk—Bridgeport Hardware Mfg. Corp., Bridgeport, Conn.  
 Morrill, Apex—Chas. Morrill, New York, N. Y.  
 Sayre, L. A., Co., Newark, N. J.

**ORANGE MINERAL.**

Eagle-Fischer Lead Co., Cincinnati, Ohio.

**ORE SAMPLER.**

Scobey—Mine & Smelter Supply Co., Salt Lake City, Utah.

**ORSATS.**

Franklin—G. Frank Duemler, Philadelphia, Pa.  
 Precision—Precision Instrument Co., Newark, N. J.

**OUTFITS, CUTTING, OXY-ACETYLENE.**

(See also "Welding and Cutting Apparatus")  
 The Bastian-Blessing Co., Chicago, Ill.

**Ovens, for Burning Bagasse, and Conveyors.**

Porcupine Boiler Company, The, Bridgeport, Conn.  
 Young Bros. Company, Detroit, Mich.

**Ovens, Core, Shaming and Japanning.**

Bellevue—Bellevue Furnace Co., Detroit, Mich.  
 Billow—National Supply Co., Chicago, Ill.  
 Blodgett—The G. S. Blodgett Co., Inc., Burlington, Vt.  
 Buckeye Products Co., Cincinnati, O.  
 Canton Clothes Dryer Co., Canton, Ohio.  
 Central Foundry Supply Co., Columbus, Ohio.  
 Central Iron Works, Quincy, Ill.  
 Coleman—Foundry Equipment Co., Cleveland, O.  
 Cullen & Atkinson Co., Inc., The, Hartford, Conn.  
 Detroit Heating & Lighting Co., Detroit, Mich.  
 Hill & Griffith Co., Cincinnati, O.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Koppers, B. Co., Pittsburgh, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Littleford Bros., Cincinnati, O.  
 Meek Oven Co., Newburyport, Mass.  
 Monarch "Acme"—Monarch Engineering & Mfg. Co., The, Baltimore, Md. (oil, gas, coal, coke).  
 Northern Engineering Works, Detroit, Mich.  
 Obermayer Co., S., Cincinnati, O.  
 Osborn Mfg. Co., Cleveland, O.  
 Oven Equipment & Mfg. Co., New Haven, Conn.  
 Quigley Furnace & Fdy. Co., New York.  
 Roberts Portable Oven Co., Chicago, Ill.  
 Ryan, F. J., & Co., Philadelphia, Pa.  
 Sly, W. W., Mfg. Co., Cleveland, O.  
 Smith Fdy. Supply Co., J. D., Cleveland, O.  
 Steiner, E. E. Co., Inc., Newark, N. J.  
 ♦ Swartwout—Ohio Body & Blower Co., Cleveland, Ohio.  
 Wadsworth—Wadsworth Core Machine & Equipment Co., Akron, O.  
 Welded Steel Barrel Corp., Detroit, Mich.  
 Whiting Fdy. & Equipment Co., Harvey, Ill.  
 Young Bros. Co., Detroit, Mich.

**Ovens, Electric, for Industrial Uses.**

General Electric Co., Schenectady, N. Y.  
 Hughes Electric Heating Co., Chicago.  
 Heco—H. B. Eaton & Co., Inc., Boston, Mass.  
 ♦ Ohio Body & Blower Co., Cleveland, O.  
 Thelco—Thermo Electric Instrument Co., Newark, N. J.  
 Young Bros. Co., Detroit, Mich.

**Ovens, Round and Knockdown.**

Jackson Stove & Stamping Co., Jackson, Mich.

**OVERFLOWS, BASIN AND BATH, PATENT.**

(See also "Supplies and Wastes.")

American Pin Co., The, Waterbury, Conn.  
 Bishop & Babcock Co., Cleveland, O.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Cleveland Faucet Co., The, Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Femco—Frost Mfg. Co., Kenosha, Wis.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Miller Foundry & Specialty Co., No. Tonawanda, N. Y.  
 Monarch Brass Co., The, Cleveland, O.  
 New Jersey Tube Co., New York.  
 Rex—Jenkins Mfg. Co., New York, N. Y.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 United—United Brass Mfg. Co., Cleveland, O.  
 Wise, J. B., Watertown, N. Y.

**OVERFLOW, WATER CLOSET.**

Kennedy, J. W., Missoula, Mont.

**OXY-ACETYLENE APPARATUS.**

(See also Welding, Oxy-Acetylene.)

**OXYGEN, FOR INDUSTRIAL USES.**

Airco—Air Reduction Co., Inc., New York, N. Y.  
 International Oxygen Co., Newark, N. J.  
 Mine Safety Appliance Co., Pittsburgh, Pa.

**Ozonators.**

Electric Water Sterilizer & Ozone Co., Scottsdale, Pa.  
 General Electric Co., Schenectady, N. Y.  
 Sprague Electric Works, New York, N. Y.  
 United States Ozone Co., Scottsdale, Pa.

**PACKERS, OIL AND GAS WELL.**

Diamond Rubber Co., Inc., The, Akron, O.  
 Dresser, S. R., Mfg. Co., Bradford, Pa.  
 Larkin Bros., Bartlesville, Okla.  
 Larkin & Co., Butler, Pa.  
 Masseth Packer & Machine Co., Butler, Pa.  
 Oil Well Supply Co., Pittsburg, Pa.  
 Parkersburg Machine Co., Parkersburg, W. Va.  
 Robinson, Packer, Tulsa, Okla.  
 Spang & Co., Butler, Pa.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.

**PACKERS, SIPHON.**

Canfield Rubber Co., The, Bridgeport, Conn.  
 The H. O. Canfield Co., Bridgeport, Conn.

**PACKERS, WELL.**

Chicago Well Supply Co., Chicago, Ill.

**PACKING, AIR BRAKE.**

Dominion Asbestos & Rubber Corp., New York.  
 Fieldco—E. E. Field & Co., Worcester, Mass.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Mabba Hydraulic Packing Co., Chicago, Ill.  
 Marsh, Chas. W. Co., Muskegon, Mich.  
 Kearsby & Mattison Co., Ambler, Pa.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 U. S. Indestructible Gasket Co., New York, N. Y.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.

**PACKING, AIR PUMP AND COMPRESSOR.**

Eagle—Eagle Packing & Rubber Co., Inc., New York, N. Y.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Martell Packing Co., Elyria, Ohio.  
 Metric Packing Co., Inc., Buffalo, N. Y.  
 ♦ Semibronze—General Asbestos & Rubber Co., Charleston, S. C.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Union Asbestos & Rubber Co., Chicago, Ill.

**PACKING, AMMONIA.**

Amazon—Revere Rubber Co., Chelsea, Mass.  
 Anchor—The Anchor Packing Co., Philadelphia, Pa.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 ♦ Belmont—Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Boston Belting Co., Boston, Mass.  
 Brown—F. H. Brown Packing Co., Philadelphia, Pa.  
 Buffalo Packing & Rubber Co., Buffalo, N. Y.  
 COP Rivalate—The Strong Machinery & Supply Co., New York, N. Y.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Crandall Reinforced Packing Co., Palmyra, N. Y.  
 Danubil—Danubil Co., The, New York.  
 Darcoid—Dominion Asbestos & Rubber Corp., New York.



Dealers Steam Packing Co., The, Palmyra, N. Y.  
 Double Service Packing Co., Philadelphia, Pa.  
 Eagle—Eagle Packing & Rubber Co., Inc., New York, N. Y.  
 Eagleline—Eagle Oil & Supply Co., Boston, Mass.  
 Eureka—Eureka Packing Co., Sales Dept., New York.  
 Feodor Burgmann, New York, N. Y.  
 France Packing Co., The, Philadelphia, Pa.  
 Garlock—The Garlock Packing Co., Palmyra, N. Y.  
 General Asbestos & Rubber Co., Charleston, S. C.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Gould's—Gould Packing Co., E., Cambridge, Mass.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Huhn Mfg. Co., Arlington, N. J.  
 John Crane—Crane Packing Co., Chicago, Ill.  
 Jones—Jones Packing Co., New York.  
 Knowlton—Geo. W. Knowlton Rubber Co., Boston.  
 Little Giant—Revere Rubber Co., Chelsea, Mass.  
 Maquire Rubber Co., New York, N. Y.  
 Metalpac—Goodsell Packing Co., Maywood, Ill.  
 Ovalhole—Hollow Center Packing Co., Cleveland, O.  
 Paine—Paine Metallic Packing Co., Shawanese, Pa.  
 Passaic Metal Packing Co., Delawanna, N. J.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 P. P. P.—Quaker City Rubber Co., Philadelphia, Pa.  
 Raco—Robt. A. Keasbey Co., New York, N. Y.  
 Red Wings—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Revere. Giant, Black Hawk—United States Rubber Co., Mechanical Goods Div., New York.  
 Royal-White—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.  
 Selden's—American Steam Packing Co., Boston, Mass.  
 Selden's—Randolph Brandt, New York, N. Y.  
 Skookum—Pioneer Rubber Mills, San Francisco, Cal.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Strong Machinery & Supply Co., New York, N. Y.  
 Vanda Co., The, New York, N. Y.  
 Vanda—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.  
 Wise & Bailey, Philadelphia, Pa.  
 Zena—Randolph Brandt, New York, N. Y.

**PACKING, ASBESTOS, ROPE, TWIST AND WICK.**  
 Asbestos—Federal Asbestos Co., Paterson, N. J.  
 Asbestos Fibre Spinning Co., North Wales, Pa.  
 Asbestos & Rubber Works of America, New York.  
 Asbestos Textile Co., Inc., New York, N. Y.  
 Atlantic Asbestos Co., Philadelphia, Pa.  
 Belmont—Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Braiding & Packing Works of America, Inc., Brooklyn, N. Y.  
 Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Buffalo—Buffalo Packing & Rubber Co., Buffalo, N. Y.  
 Cancos Mfg. Co., Philadelphia, Pa.  
 Carey, Philip, Mfg. Co., Cincinnati, O.  
 Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Clinton—Clinton Mfg. Co., Brooklyn, N. Y.  
 Consolidated Packing & Supply Co., New York, N. Y.  
 Crandall's Reinforced—Crandall Packing Co., Palmyra, N. Y.  
 Daubill Co., New York, N. Y.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Elkhart Rubber Works, Elkhart, Ind.  
 Eureka—Eureka Packing Co., Sales Dept., New York.  
 Garco—General Asbestos & Rubber Co., Charleston, S. C.  
 Globe—Hayden Supply Co., Grand Rapids, Mich.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Goodyear Tire & Rubber Co., Akron, O.  
 Greenblatt Asbestos Mfg. Co., Inc., New York, N. Y.  
 Guillott Metal Gasket & Supply Co., Chicago.  
 Jenkins—Jenkins Bros., New York.  
 Johnson Co., Inc., The, Henry, Jersey City, N. J.  
 Johns-Manville, Inc., New York, N. Y.  
 Keasbey & Mattison Co., Ambler, Pa.  
 Knowlton Rubber Co., Geo. W., Boston, Mass.  
 Live Steam—A. W. Chesterton Co., Boston, Mass.  
 Magnolia—Montgomery Bros., Inc., Philadelphia, Pa.  
 Maguire Rubber Co., New York, N. Y.  
 Mikesell Brothers Co., Chicago, Ill.  
 Pactite—Federal Metallic Packing Co., Boston, Mass.  
 Perfection Tire & Rubber Co., Wabash, Ind.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Raco—Robt. A. Keasbey Co., New York, N. Y.  
 Runwel—Greene, Tweed & Co., New York.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Steamtite—Federal Asbestos Co., Paterson, N. J.  
 Tisafine—Strong Machinery & Supply Co., The, New York, N. Y.  
 Twin City Pipe Covering Co., Minnesota Transfer, Minn.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 United States Asbestos Co., Manheim, Pa.  
 Vulcabeston—Johns-Pratt Co., The, Hartford, Conn.  
 Watson, H. F., Erie, Pa.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.  
 Wise & Bailey, Philadelphia, Pa.

**PACKING, CAR JOURNAL.**

Franklin Mfg. Co., Franklin, Pa.  
 Hagy, J. Milton, Waste Works, Philadelphia, Pa.  
 Meyer, Bernstein & Sons, Neenah, Wis.  
 Perfection—Franklin Mfg. Co., Franklin, Pa.  
 Plumbago Hair Car Grease—Swan & Finch Co., New York, N. Y.  
 Resilient—Flower Waste & Packing Co., New York.  
 Standard Leather Packing Co., Boston, Mass.

**PACKING, CONDENSER TUBE.**

Allen—Allen Packing Co., Collingswood, N. J.  
 Dominion Asbestos & Rubber Corp., New York.  
 John Crane—Crane Packing Co., Chicago, Ill.  
 Kotten Machine Co., Jersey City, N. J.  
 Peck's—The Geo. F. Peck Mfg. Co., Chelsea, Mass.  
 Standard Packings Co., Marion Bldg., Cleveland, O.

**PACKING, COTTON.**

Belmont—Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Consolidated Packing & Supply Co., New York, N. Y.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 El Sud—McMaster-Carr Supply Co., Chicago, Ill.  
 Eureka—Eureka Packing Co., Sales Dept., New York.  
 Gould's—The Gould Packing Co., E. Cambridge, Mass.  
 K. C.—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 Smoky City and White City—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Wise & Bailey, Philadelphia, Pa.

**PACKING, DIAPHRAGM.**

Boston Belting Co., Boston, Mass.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Doermann-Rocher Co., Cincinnati, O.  
 Dominion Asbestos & Rubber Corp., New York.  
 Gutta Percha & Rubber Mfg. Co., New York.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.  
 Stokes Rubber Co., The, Jos. W., Trenton, N. J.

**PACKING, DUCK.**

Clipper, Gulf, No. 57, Titan—Diamond Rubber Co., Inc., Akron, Ohio.  
 Garco—General Asbestos & Rubber Co., Charleston, S. C.  
 Standard Packings Co., Marion Bldg., Cleveland, O.

**PACKING, ELEVATOR.**

Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Black Hawk, Four Ace, Samson—United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Eureka—Eureka Packing Co., New York, N. Y.  
 General Asbestos & Rubber Co., Charleston, S. C.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Gould's—The Gould Packing Co., E. Cambridge, Mass.  
 Long Life—Sutherland Co., F. L., Detroit, Mich.  
 Ovalhole—Hollow Center Packing Co., Cleveland, O.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Skookum—Pioneer Rubber Mills, San Francisco, Cal.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Wear Well—Detroit Leather Specialty Co., Inc., Detroit, Mich.  
 Wise & Bailey, Philadelphia, Pa.

**PACKING, FELT.**

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Brawley, T. R., Brooklyn, N. Y.  
 Fieldco—R. B. Field & Co., Worcester, Mass.  
 Star Felt Cutting Co., The, Brooklyn, N. Y.  
 Sutherland, F. L., Co., Detroit, Mich.

**PACKING, FIBROUS.**

Anchor Packing Co., The, Philadelphia, Pa.  
 Barwood—The J. L. Barwood Mfg. Co., Boston, Mass.  
 Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Black Hawk—Revere Rubber Co., Chelsea, Mass.  
 Brawley, T. R., Brooklyn, N. Y.  
 Brown—F. H. Brown Packing Co., Philadelphia, Pa.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Continental Fibre Co., Newark, Del.

**Crandall's Reinforced**—Crandall Packing & Supply Co., Delaware Hard Fibre Co., Marshallton, Del.  
**Danubill**—Danubill Co., New York, N. Y.  
**Dominion Asbestos & Rubber Corp.**, New York, N. Y.  
**Dixie**—The Dixie Packing Co., Atlanta, Ga.  
**Duroil**—United States Asbestos Co. of Illinois, Chicago, Ill.  
**Endura**—Endura Mfg. Co., Philadelphia, Pa.  
**Eureka**—Eureka Packing Co., New York, N. Y.  
**Federalite**—Federal Metallic Packing Co., Boston, Mass.  
**Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
**Gould's**—The Gould Packing Co., E. Cambridge, Mass.  
**Janos**—Burgmann Asbestos & Packing Mills, New York, N. Y.  
**Kobold**—Kobold Sales Co., New Orleans, La.  
**Ovalhole**—Hollow Center Packing Co., Cleveland, O.  
**Pactite**—Federal Metallic Packing Co., Boston, Mass.  
**Pilley's**—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
**Quaker City Rubber Co.**, Philadelphia, Pa.  
**Sandow**—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
**Standard Packings Co.**, Marion Bldg., Cleveland, O.  
**Tan Fibre**—Baeder, Adamson & Co., Philadelphia, Pa.  
**Vanda**—Vanda Co., The, New York, N. Y.  
**Wilcox Mfg. Co.**, E. A., Chicago, Ill.  
**Wise & Bailey**, Philadelphia, Pa.

**PACKING, FLANGE.**

(See "Gaskets, Metallic.")

**PACKING, FLAX.**

**Albion**—Albion Mfg. Co., Seattle, Wash.  
**Apex**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**Arrow**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Beaver**—Henry Johnson Co., Jersey City, N. J.  
**Bell**—Belmont Packing & Rubber Co., Philadelphia, Pa.  
**Boston**—A. W. Chesterton Co., Boston, Mass.  
**Braiding & Packing Works of America, Inc.**, Brooklyn, N. Y.  
**Cancos Mfg. Co.**, Philadelphia, Pa.  
**Carbon**—New York Belting & Packing Co., New York, N. Y.  
**Chesterton**—A. W. Chesterton Co., Boston, Mass.  
**Chicora**—General Asbestos & Rubber Co., Charleston, S. C.  
**Clinton**—Clinton Mfg. Co., Brooklyn, N. Y.  
**Commercial**—General Asbestos & Rubber Co., Charleston, S. C.  
**Consolidated, Council, Senate and Assembly**—Consolidated Packing & Supply Co., New York, N. Y.  
**Crandall's Reinforced**—Crandall Packing Co., Palmyra, N. Y.  
**Danubill Co.**, New York, N. Y.  
**Dealers' Steam Packing Co.**, Palmyra, N. Y.  
**Dominion**—Dominion Asbestos & Rubber Corp., New York, N. Y.  
**Double Diamond**—New York Belting & Packing Co., New York, N. Y.  
**Double Service Packing Co.**, Philadelphia, Pa.  
**Dragon**—Quaker City Rubber Co., Philadelphia, Pa.  
**Eagleline**—Eagle Oil & Supply Co., Boston, Mass.  
**Earl**—Dominion Asbestos & Rubber Corp., New York, N. Y.  
**Emergency**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Eureka**—Eureka Packing Co., Sales Dept., New York, N. Y.  
**Federal Asbestos Co.**, Paterson, N. J.  
**Feodor Burgmann**, New York, N. Y.  
**Fox Bros. & Co.**, New York, N. Y.  
**Garlock**—The Garlock Packing Co., Palmyra, N. Y.  
**Giant Granite**—Revere Rubber Co., Chelsea, Mass.  
**Gilt Edge**—General Asbestos & Rubber Co., Charleston, S. C.  
**Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
**Grapho Flax**—General Asbestos & Rubber Co., Charleston, S. C.  
**Hollow Center Packing Co.**, Cleveland, O.  
**Hudson Mechanical Rubber Co.**, New York, N. Y.  
**India**—A. W. Chesterton Co., Boston, Mass.  
**Iron City, Practical, Reliance**—Pittsburgh Steam Packing Co., Pittsburgh, Pa.  
**Jacobs-Miller Co.**, The, Cincinnati, O.  
**Janos Asbestos Co.**, New York, N. Y.  
**K. C.**—Kansas City Rubber & Belting Co., Kansas City, Mo.  
**Keystone**—John M. Watts Sons, Philadelphia, Pa.  
**Knowlton Golden**—Geo. W. Knowlton Rubber Co., Boston, Mass.  
**Kobold**—Kobold Sales Co., New Orleans, La.  
**La Favorite Rubber Mfg. Co.**, Paterson, N. J.  
**Liberty Bell**—Quaker City Rubber Co., Philadelphia, Pa.  
**Magnolia**—W. D. Allen Mfg. Co., Chicago, Ill.  
**Merino**—Henry Johnson Co., Jersey City, N. J.  
**Metric Packing Co., Inc.**, Buffalo, N. Y.  
**Navy**—General Asbestos & Rubber Co., Charleston, S. C.  
**Nemo**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**Nonpareil**—John M. Watts Sons, Philadelphia, Pa.  
**Ovalhole**—Hollow Center Packing Co., Cleveland, O.  
**Pax**—New York Belting & Packing Co., New York, N. Y.  
**Perfection Tire & Rubber Co.**, Wabash, Ind.  
**Red Diamond**—Combination Rubber Mfg. Co., Bloomfield, N. J.

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**Regent**—Dominion Asbestos & Rubber Corp., New York, N. Y.  
**Regia**—Canfield Mfg. Co., Ltd., Philadelphia, Pa.  
**Revere**—Revere Rubber Co., Boston, Mass.  
**Rising Sun**—Cancos Mfg. Co., Philadelphia, Pa.  
**Rivalate**—The Strong Machinery & Supply Co., New York, N. Y.  
**Salisbury, W. H., & Co., Inc.**, Chicago, Ill.  
**Scoto**—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
**Silk Fibre**—The Jas. B. Hunt Mfg. Co., Trenton, N. J.  
**Sovereign**—Dominion Asbestos & Rubber Corp., New York, N. Y.  
**Special**—A. W. Chesterton Co., Boston, Mass.  
**Standard Packings Co.**, Marion Bldg., Cleveland, O.  
**Sterling**—A. W. Chesterton Co., Boston, Mass.  
**Union Asbestos & Rubber Co.**, Chicago, Ill.  
**Uncle Sam**—Quaker City Rubber Co., Philadelphia, Pa.  
**Union Rubber & Asbestos Co.**, Trenton, N. J.  
**Valley Forge**—Quaker City Rubber Co., Philadelphia, Pa.  
**Vanda**—The Vanda Co., New York, N. Y.  
**Western Rubber Co.**, Goshen, Ind.  
**W. H. S. & Co.**—W. H. Salisbury & Co., Inc., Chicago, Ill.  
**XXX, XX**—American Steam Packing Co., Boston, Mass.

**PACKING, GAGE GLASS.**

(See "Washers and Gaskets, Gage Glass.")

**PACKING, HEMP.**

**Belmont Packing & Rubber Co.**, Philadelphia, Pa.  
**Clinton**—Clinton Mfg. Co., Brooklyn, N. Y.  
**Consolidated**—Consolidated Packing & Supply Co., New York, N. Y.  
**Dominion Asbestos & Rubber Corp.**, New York, N. Y.  
**Double Service Packing Co.**, Philadelphia, Pa.  
**Eureka**—Eureka Packing Co., New York, N. Y.  
**Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
**H. & A.**—Hoooven & Allison Co., The, Xenia, Ohio.  
**Jacobs-Miller Co.**, The, Cincinnati, O.  
**Ovalhole**—Hollow Center Packing Co., Cleveland, O.  
**Planet Mfg. Co.**, Brooklyn, N. Y.  
**Quaker City Rubber Co.**, Philadelphia, Pa.  
**Union Asbestos & Rubber Co.**, Chicago, Ill.  
**Winne, Frank W., & Son**, Philadelphia, Pa.  
**Wise & Bailey**, Philadelphia, Pa.

**PACKING, HOT WATER.**

**Albion**—Albion Mfg. Co., Seattle, Wash.  
**Belmont Packing & Rubber Co.**, Philadelphia, Pa.  
**Carolina**—General Asbestos & Rubber Co., Charleston, S. C.  
**Danubill**—Danubill Co., New York, N. Y.  
**Dealers' Steam Packing Co.**, The, Palmyra, N. Y.  
**Dominion Asbestos & Rubber Corp.**, New York, N. Y.  
**Goetze Gasket & Packing Co.**, New Brunswick, N. J.  
**Hollow Center**—Clement Restein Co., Philadelphia, Pa.  
**Ovalhole**—Hollow Center Packing Co., Cleveland, O.  
**Pilley's**—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
**Revere Extra Hydraulic**—Revere Rubber Co., Boston, Mass.  
**Standard Packings Co.**, Marion Bldg., Cleveland, O.  
**Union Asbestos & Rubber Co.**, Chicago, Ill.  
**United States Rubber Co.**, Mechanical Goods Div., New York, N. Y. Trade names—Combination, Giant Pump, Shawmut.

**PACKING, HYDRAULIC.**

(See also "Packing, Hydraulic, Leather.")

**Acme Rubber Mfg. Co.**, The, Trenton, N. J.  
**Albion**—Albion Mfg. Co., Seattle, Wash.  
**Ankorite**—Anchor Packing Co., The, Philadelphia, Pa.  
**Belmont Packing & Rubber Co.**, Philadelphia, Pa.  
**Bickford & Francis Belting Co.**, Buffalo, N. Y.  
**Black Hawk**—Revere Rubber Co., Boston, Mass.  
**Buffalo**—Buffalo Packing & Rubber Co., Buffalo, N. Y.  
**Carbon, B & P**—New York Belting & Packing Co., New York, N. Y.  
**Cancos Mfg. Co.**, Philadelphia, Pa.  
**Carey**—The Philip Carey Mfg. Co., Cincinnati, O.  
**Casco Bar**—Metallic Packing Co., Chicago, Ill.  
**Cesco**—Chicago Engineer Supply Co., Chicago, Ill.  
**Cincinnati**—Cincinnati Gasket & Packing Co., Cincinnati, O.  
**Chicago Belting Company**, Chicago, Ill.  
**Clay**—The Henry Johnson Co., Jersey City, N. J.  
**Cleveland Faucet Co.**, The, Cleveland, O.  
**Clinton**—Clinton Mfg. Co., Brooklyn, N. Y.  
**Cook Belting Co.**, H. M., San Francisco, Cal.

Consolidated—Consol. Packing & Supply Co., New York, N. Y.  
 Crandall's Lip—Crandall Packing Co., Palmyra, N. Y.  
 Crown—Quaker City Rubber Co., Philadelphia, Pa.  
 Danubil—Danubil Co., The, New York, N. Y.  
 Defender—Woven Steel Hose & Rubber Co., Trenton, N. J.  
 Diamond Rubber Co., Inc., Akron, Ohio. Trade names—Diamond, Titan, Sphinx, Gulf, Moose, Clipper, Denance.  
 Donkey—Quaker City Rubber Co., Philadelphia, Pa.  
 Dominion Asbestos & Rubber Corp., New York.  
 ♦ Double Diamond—New York Belting & Packing Co., New York, N. Y.  
 D. S.—Double Service Packing Co., Philadelphia, Pa.  
 Duo—The Garlock Packing Co., Palmyra, N. Y.  
 Eagle—Eagle Packing & Rubber Co., Inc., New York, N. Y.  
 Eagleline—Eagle Oil & Supply Co., Boston, Mass.  
 Elmes Engineering Works, Chas. F., Chicago, Ill.  
 Emblem—Maquire Rubber Co., New York, N. Y.  
 Eureka—Eureka Packing Co., Sales Dept., New York.  
 Excelsior—Excelsior Valve Co., New York, N. Y.  
 ♦ Falcon—Goodrich Rubber Co., B. F., Akron, Ohio.  
 Four Ace—Revere Rubber Co., Boston, Mass.  
 Fox Bros. & Co., New York, N. Y.  
 France Packing Co., The, Philadelphia, Pa.  
 ♦ General Asbestos & Rubber Co., Charleston, S. C.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Gould's—The Gould Packing Co., E. Cambridge, Mass.  
 Gutta Percha & Rubber Mfg. Co., New York.  
 Hercules—Quaker City Rubber Co., Philadelphia, Pa.  
 Hewitt Rubber Co., Buffalo, N. Y.  
 Hudson Mechanical Rubber Co., New York, N. Y.  
 Hydropak—Imperial Packing Corp., New York, N. Y.  
 ♦ Imperial—Boston Belting Corp., Boston, Mass.  
 Janos Asbestos Company, New York, N. Y.  
 Johnson's—The Henry Johnson Co., Jersey City, N. J.  
 Jones—Jones Packing Co., New York.  
 Joseph Allen's—Joseph Allen, Collingswood, N. J.  
 Kingfisher—The Strong Machinery & Supply Co., New York, N. Y.  
 Kobold—Kobold Sales Co., New Orleans, La.  
 Long Life—Sutherland Co., F. L., Detroit, Mich.  
 Lubron—Knowlton Packing Co., Inc., Newtonville, Mass.  
 Mabbs Hydraulic Packing Co., Chicago, Ill.  
 Marguerite—Cancos Mfg. Co., Philadelphia, Pa.  
 Marsh, Chas. W. Co., Muskegon, Mich.  
 ♦ Monitor—The B. F. Goodrich Rubber Co., Akron, O.  
 Montauk—Clinton Mfg. Co., Brooklyn, N. Y.  
 ♦ Monterey—Goodyear Tire & Rubber Co., Akron, O.  
 M. R. Co.—Maquire Rubber Co., New York, N. Y.  
 New Era Metallic Packing Mfg. Co., New York, N. Y.  
 ♦ Ovalhole—Hollow Caster Packing Co., Cleveland, O.  
 Passaic Metal Packing Co., Delawanna, N. J.  
 Phoenix—Boston Belting Corp., Boston, Mass.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Puritan, Norwood—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Revere Extra—Revere Rubber Co., Boston, Mass.  
 Roxbro—Boston Belting Corp., Boston, Mass.  
 Sable—Henry Johnson Co., Jersey City, N. J.  
 Salisbury, W. H. & Co., Chicago, Ill.  
 Selden—Randolph Brandt, New York, N. Y.  
 Shawmut—Revere Rubber Co., Boston, Mass.  
 ♦ Solid Ring—A. W. Chesterton Co., Boston, Mass.  
 Sphinx—The Diamond Rubber Co., Inc., Akron, O.  
 ♦ Spider—New York Belting & Packing Co., New York.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Titan—The Diamond Rubber Co., Akron, O.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 Vanda—The Vanda Co., New York, N. Y.  
 Vim—E. F. Houghton & Co., Philadelphia, Pa.  
 ♦ Vorhees Rubber Mfg. Co., Jersey City, N. J. Trade names—Corona, Criterion, Model Cross Cut.  
 Walker, Estate of Chas. W., Newark, N. J.  
 Walker, James, & Co., Ltd., New York, N. Y.  
 Wearwell & Longwear—Wearwell Gasket & Packing Co., Camden, N. J.  
 ♦ Wear Well—Detroit Leather Specialty Co., Inc., Detroit, Mich.  
 Western Rubber Co., Goshen, Ind.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.  
 Wise & Bailey, Philadelphia, Pa.  
 Wolverine Leather Goods Co., Detroit, Mich.  
 ♦ Wyoga—Goodyear Tire & Rubber Co., Akron, O.  
 Zena—Randolph Brandt, New York, N. Y.

#### PACKING, HYDRAULIC, LEATHER AND RAWHIDE.

Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—The L. J. Barwood Co., Stoneham, Mass.  
 ♦ Bonner & Barnewall, Inc., New York, N. Y.  
 ♦ Chicago Rawhide Co., Chicago, Ill.  
 Chibeco—Chicago Belting Co., Chicago, Ill.  
 ♦ Cochecho—L. B. Williams & Sons, Dover, N. H.  
 Darling Pump & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Dominion Asbestos & Rubber Corp., New York.  
 Everlasting—Montpellier Cup & Metal Works, Montpellier, Ind.  
 Fibrous Babbitt—Buhne Metal Packing Co., New York, N. Y.  
 Fieldco—R. E. Field & Co., Worcester, Mass.

Flexo—Cross Bros. & Co., Rochester, N. Y.  
 Forest City Leather Washer Co., Rockford, Ill.  
 ♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 John Crane—Crane Packing Co., Chicago, Ill.  
 Johnson, Henry, Co., The, Jersey City, N. J.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Kendrick Valve & Washer Co., Syracuse, N. Y.  
 Kromax—Watson-Stillman Co., Aldene, N. J.  
 Krome—The Chicago Rawhide Mfg. Co., Chicago, Ill.  
 ♦ Ladew, Edward R., Co., Inc., Glen Cove, N. Y.  
 Mabbs—Mabbs Hydraulic Packing Co., Chicago.  
 MacWatty Belting Co., Providence, R. I.  
 Marstor & Co., I. G., Boston, Mass.  
 M. L. P.—Michigan Leather Packing Co., Inc., Detroit, Mich.  
 Montgomery Bros., Inc., Philadelphia, Pa.  
 National Leather Belting Co., New York, N. Y.  
 New York Leather Belting Co., Brooklyn, N. Y. (cup flange, U).  
 Porpoise—Eastern Machinery & Equipment Co., Inc., Philadelphia, Pa.  
 Rawhide—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Rockford Leather Washer Co., Rockford, Ill.  
 ♦ Schieren, Chas. A., Co., New York, N. Y.  
 ♦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Success—Climax Sanitary Co., Detroit, Mich.  
 Sutherland Leather & Felt Co., Detroit, Mich.  
 "U"—Chas. W. Marsh Co., Muskegon, Mich.  
 Vim—E. F. Houghton & Co., Philadelphia, Pa.  
 Western Rawhide & Belting Co., Milwaukee, Wis.  
 White Rock, Stonewall—Goodall Rubber Co., Philadelphia, Pa.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.

#### PACKING, JUTE.

Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.  
 Cancos Mfg. Co., Philadelphia, Pa.  
 Congo—Clinton Mfg. Co., Brooklyn, N. Y.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service—Double Service Packing Co., Philadelphia, Pa.  
 Eagle—St. Louis Cordage Mills, St. Louis, Mo.  
 Eagle—American Mfg. Co., Brooklyn, N. Y.  
 Eureka—Eureka Packing Co., Sales Dept., New York, N. Y.  
 Federal Asbestos Co., Paterson, N. J.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 ♦ G. S. O. Co.—Geo. Stratford Oakum Co., Jersey City.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Hoffman Corr Mfg. Co., New York, N. Y.  
 H. & A.—Hooven & Allison Co., The, Xenia, Ohio.  
 Overman & Schrader Cordage Co., Covington, Ky.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 ♦ Stratford—Stratford Oakum Co., Geo., Jersey City, N. J.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 Winne, Frank W., & Sons, Inc., Philadelphia, Pa.  
 Wise & Bailey, Philadelphia, Pa.

#### PACKING, METAL, FOR PISTON & VALVE RODS.

Aldrich Pump Co., Allentown, Pa.  
 France Packing Co., Inc., Tacony, Philadelphia, Pa.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Harper Mfg. Co., Chester, Pa.  
 Martell Packing Co., Elyria, Ohio.

#### PACKING, PISTON, METALLIC.

Acme—Warren & Bailey Mfg. Co., Los Angeles, Cal.  
 Albion—Albion Mfg. Co., Seattle, Wash.  
 Ambest—Eureka Packing Co., New York, N. Y.  
 Ambest—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 American—American Metallic Packing Co., Pittsburgh, Pa.  
 Ames Alloy—U. S. Indestructible Gasket Co., New York, N. Y.  
 Anchor Packing Co., The, Philadelphia, Pa.  
 Asbestos Fibre Spinning Co., North Wales, Pa.  
 Asco—American Supply Co., Mobile, Ala.  
 A-Y-A—Adkins, Young & Allen Co., Chicago, Ill.  
 B. E.—J. C. Edgecombe & Co., New York, N. Y.  
 ♦ Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
 Buffalo—Buffalo Packing & Rubber Corp., Buffalo, N. Y.  
 Burgmann Asbestos & Packing Mills, New York, N. Y.  
 Cancos Mfg. Co., Philadelphia, Pa.  
 Carey—The Philip Carey Mfg. Co., Cincinnati, O.  
 Casco—Casco Bar-Metallic Packing Co., Chicago.  
 Champion—Cancos Mfg. Co., Philadelphia, Pa.  
 Chancelco—Cooley Mfg. Co., Inc., New York, N. Y.  
 Clark—Clark Flexible Metallic Packing Co., Portland, Maine.  
 Collins—Collins Metallic Packing Co., Philadelphia.  
 Colossus—Colossus Co., Inc., Shreveport, La.  
 Commonwealth—Commonwealth Motors Co., Chicago, Ill.  
 Consolidated—Consolidated Packing & Supply Co., New York.  
 Cook's—C. Lee Cook Mfg. Co., Louisville, Ky.  
 Danubil—Danubil Co., Inc., New York, N. Y.

- Diamond Rubber Co., Inc., Akron, O. Trade names—Gulf, Titan, K. H. Diamond, Red Core.  
 Double Service Packing Co., Philadelphia, Pa.  
 Dominion Asbestos & Rubber Corp., New York.  
 Durabla—Durabla Mfg. Co., New York, N. Y.  
 Durametallic—New Era Mfg. Co., Kalamazoo, Mich.  
 Duval—Power Specialty Co., New York, N. Y.  
 Eagle—Eagle Packing & Rubber Co., Inc., New York, N. Y.  
 Elastic—Adkins, Young & Allen Co., Chicago, Ill.  
 Elite—Cincinnati Gasket & Packing Co., Cincinnati, O.  
 Em Ca—Acme Mfg. Co., Memphis, Tenn.  
 Enduro (braided)—Endura Mfg. Co., Philadelphia, Pa.  
 F. P. Metal—John Finn Metal Works, San Francisco, Cal.  
 ♦ Faultless—Hoyt Metal Co., St. Louis, Mo.  
 Federalite—Federal Metallic Packing Co., Boston, Mass. (flexible, compressible).  
 Feodor Burgmann, New York, N. Y.  
 France Packing Co., The, Philadelphia, Pa.  
 Garlock—The Garlock Packing Co., Palmyra, N. Y.  
 ♦ General Asbestos & Rubber Co., Charleston, S. C.  
 Giant, Samson—Revere Rubber Co., Boston, Mass.  
 Glacier—Glacier Metal Co., Richmond, Va.  
 Goetze's—Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Guillott Metal Gasket & Supply Co., Chicago, Ill.  
 Guarantee—M. J. Walsh Machinery Co., Milwaukee, Wis.  
 Harper Mfg. Co., Chester, Pa.  
 Hewitt Rubber Co., Buffalo, N. Y.  
 High Speed—High Speed Metallic Packing Co., Chicago, Ill.  
 Hold-Fast—Plastic Metallic Packing Co., Cleveland, Ohio.  
 Holmes—Holmes Metallic Packing Co., Wilkes-Barre.  
 Hudson—Hudson Mech'l Rubber Co., New York.  
 Huhn Mfg. Co., Arlington, N. J.  
 Jerome Metallic Packing Co., Chicago, Ill.  
 Jones—Jones Packing Co., New York.  
 Katzensteins—L. Katzenstein & Co., New York, N. Y.  
 Kay, Wm. H., Co., New York, N. Y.  
 Klingerit—Crane Co., Chicago, Ill.  
 Law—Law Metallic Packing Co., Newark, N. J.  
 Law—The Bridgeport Metallic Packing Co., Bridgeport, Conn.  
 Lion—James Walker & Co., Ltd., New York, N. Y.  
 Lubestos, Stemtite—Metric Packing Co., Inc., Buffalo, N. Y.  
 Magneto—Randolph Brandt, New York, N. Y.  
 Metalpac—Goodsell Packing Co., Maywood, Ill.  
 Morris Metallic Packing Co., Philadelphia, Pa.  
 National—National Metallic Packing Co., Oberlin, O.  
 ♦ Norka, Norwood—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Northern, Jerome and U. S. Types—Northern Metallic Packing Co., St. Paul, Minn.  
 Olympia—C. W. Trainer Mfg. Co., Boston, Mass.  
 ♦ Ovalhole—Hollow Center Packing Co., Cleveland, O.  
 Passaic Metal Packing Co., Delawanna, N. J.  
 Paxton—The Mitchell Co., Omaha, Neb.  
 Perfection—Chicago Engineer Supply Co., Chicago.  
 Philkob—James I. Brown, New York, N. Y.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Provo—Provost Engineering Corp., Brooklyn, N. Y.  
 Red Seal—John Simmons Co., New York, N. Y. (kneadable).  
 Rex—Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Rivalate—The Strong Machinery & Supply Co., New York.  
 Rogers—Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.  
 Safety—Steel Mill Packing Co., Detroit, Mich.  
 Salisbury, W. H., & Co., Inc., Chicago, Ill.  
 Saunders—U. S. Indestructible Gasket Co., New York.  
 Semi-Metallic—Pittsburgh Steam Packing Co., Pittsburgh, Pa.  
 South Park Machine & Supply Co., Port Huron, Mich.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Staytite—H. G. Hammett, Troy, N. Y.  
 Steamtite—Federal Asbestos Co., Paterson, N. J.  
 Sterling—The Monarch Steam Blower Co., Troy, N. Y.  
 Tripp—W. B. Merrill & Co., Jamaica Plain, Boston, Mass.  
 Trojan—H. G. Hammett, Troy, N. Y.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 United States—U. S. Metallic Packing Co., Philadelphia, Pa.  
 Valvetite—Akron Metallic Gasket Co., Akron, Ohio.  
 Vulcan—Vulcan Asbestos Mfg. Co., Inc., New York.  
 Wakelee—Lubron Co., The, Everett, Mass.  
 Walker—Walker Metallic Packing Co., Philadelphia, Pa.  
 Walsh—Walsh Packing Co., Philadelphia, Pa.  
 Wilcox Mfg. Co., E. A., Chicago, Ill.
- PACKING, PISTON, DIAGONAL, GUM CORE, RING, ROUND, SPIRAL, SECTIONAL, SQUARE AND WEDGE.**
- Acme Rubber Mfg. Co., The, Trenton, N. J.  
 Admiral—Mulconroy Co., Inc., Philadelphia.  
 Alden—The Henry Johnson Co., Jersey City, N. J.
- Alta—Pacific Coast Rubber & Sup. Co., San Francisco, Cal.  
 Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Arlon—Consolidated Rubber Co., Trenton, N. J.  
 Armor—Vulcan Asbestos Mfg. Co., The, New York.  
 Spiral—American Steam Packing Co., Boston, Mass.  
 Asbestos-Metallic, High Pressure "T" Core, Special Diamond, Diamond, American Spiral, Electric Spiral—American Steam Packing Co., Boston.  
 Atlantic—A. W. Chesterton Co., Boston, Mass.  
 ♦ Atlantic—Quaker City Rubber Co., Philadelphia, Pa.  
 ♦ Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Besta-Monia—Johns-Manville, Inc., New York.  
 Black Beauty—Union Rubber & Asbestos Co., Trenton, N. J.  
 Blackoid—Thermoid Rubber Co., Trenton, N. J.  
 Black Squadron—Cancos Mfg. Co., Philadelphia, Pa.  
 Bloomfield—Combination Rubber Co., Bloomfield, N. J.  
 Boston Belting Corp., Boston, Mass.  
 Booth Felt Co., The, Brooklyn, N. Y.  
 ♦ B. & P.—New York Belting & Packing Co., New York.  
 Brown—F. H. Brown Packing Co., Philadelphia, Pa.  
 Buffalo—Buffalo Packing & Rubber Co., Buffalo, N. Y.  
 Buffalo Weaving & Belting Co., Buffalo, N. Y. (molded rubber).  
 Burmont—Goodall Rubber Co., Inc., Philadelphia, Pa.  
 California Red—Union Rubber & Asbestos Co., Trenton, N. J.  
 Cancos Mfg. Co., Philadelphia, Pa.  
 Carson's—A. W. Chesterton Co., Boston, Mass.  
 Cassco—Cassco Bar-Metallic Packing Co., Chicago, Ill.  
 Chesterton's, Boston, Melrose, Metallo and Warrior Brands—A. W. Chesterton Co., Boston, Mass.  
 Cincinnati—Cincinnati Gasket & Packing Co., Cincinnati, O.  
 ♦ Cobbs—New York Belting & Packing Co., New York.  
 Combination—A. W. Chesterton Co., Boston, Mass.  
 Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Comet—Pacific Coast Rubber & Sup. Co., San Francisco, Cal.  
 Congress—Pacific Coast Rubber & Sup. Co., San Francisco, Cal.  
 Consolidated, Council, Senate—Consolidated Packing & Supply Co., New York, N. Y.  
 Coon—Cancos Mfg. Co., Philadelphia, Pa.  
 Crandall's—Crandall Packing Co., Palmyra, N. Y.  
 Crescent Rubber & Packing Co., Trenton, N. J.  
 ♦ Crocoite—New York Belting & Packing Co., New York.  
 Crown—Mulconroy Co., Inc., Philadelphia, Pa.  
 Dealers Steam Packing Co., The, Palmyra, N. Y.  
 Defender—Cancos Mfg. Co., Philadelphia, Pa.  
 Diagonal—General Asbestos & Rubber Co., Charleston, S. C.  
 Diagonal—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Diamond, Indian—Diamond Rubber Co., Inc., Akron, Ohio.  
 Dirigo—John M. Watts Sons, Philadelphia, Pa.  
 ♦ Dixie—General Asbestos & Rubber Co., Charleston, S. C.  
 Double Service Packing Co., Philadelphia, Pa.  
 Duplex Composition—Johns-Manville, Inc., New York, N. Y.  
 Durabla—Durabla Mfg. Co., New York, N. Y.  
 Duke—Consolidated Rubber Co., Trenton, N. J.  
 Duo—The Garlock Packing Co., Palmyra, N. Y.  
 Duro—H. W. Johns-Manville Co., New York, N. Y.  
 Earl—Dominion Asbestos & Rubber Corp., New York.  
 ♦ Ebona—The Republic Rubber Co., Youngstown, O.  
 ♦ Ebonestos—Quaker City Rubber Co., Philadelphia, Pa.  
 Edison Packing & Sales Co., Boston, Mass.  
 ♦ Egyptian Neptune—Quaker City Rubber Co., Philadelphia, Pa.  
 Elastic—A. W. Chesterton Co., Boston, Mass.  
 Elkhart Rubber Works, Elkhart, Ind.  
 Emblem—Maquire Rubber Co., New York, N. Y.  
 Empire Rubber & Tire Co., Trenton, N. J.  
 Eureka—Eureka Packing Co., Sales Dept., New York.  
 Expansion—A. W. Chesterton Co., Boston, Mass.  
 Falcon—The B. F. Goodrich Rubber Co., Akron, O.  
 Favorite—American Steam Packing Co., Boston, Mass.  
 Femco—Fairbanks, Morse & Co., Chicago.  
 ♦ Fibro Metallic—General Asbestos & Rubber Co., Charleston, S. C.  
 Four Ace Plunger—Revere Rubber Co., Boston, Mass.  
 ♦ Fulton—The Manhattan Rubber Mfg. Co., Passaic, N. J.  
 ♦ Garco Waterproof—General Asbestos & Rubber Co., Charleston, S. C.  
 Gilt Edge—La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Globe—Cancos Mfg. Co., Philadelphia, Pa.  
 Golden Gate—Bowers Rubber Works, San Francisco.  
 Gordon—Henry Johnson Co., Jersey City, N. J.  
 Gould's—The Gould Packing Co., E. Cambridge, Mass.  
 Granite—The Manhattan Rubber Mfg. Co., New York.  
 Grapho—Advance Packing & Supply Co., Chicago, Ill.  
 Graphobestos—Chicago Engineering Supply Co., Chicago, Ill.  
 ♦ Graphon—New York Belting & Packing Co., Ltd., New York, N. Y.

Gray Beauty—Union Rubber & Asbestos Co., Trenton, N. J.  
 Guillott Metal Gasket & Supply Co., Chicago, Ill.  
 Gulf—The Diamond Rubber Co., Akron, O.  
 Gutta Percha Rubber & Mfg. Co., New York.  
 G. W. K.—Geo. W. Knowlton Rubber Co., Boston.  
 Hall's—Hall Mfg. Co., New York, N. Y.  
 ♦ Helicoid—General Asbestos & Rubber Co., Charleston, S. C.  
 Hendrie, W. C. Rubber Co., Torrance, Cal.  
 Hevea—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Hickory—Randolph Brandt, New York, N. Y.  
 Hi-Fresh—W. H. Salisbury Co., Inc., Chicago, Ill.  
 Hold-Fast—Plastic Metallic Packing Co., Cleveland, O.  
 ♦ Holotite—Quaker City Rubber Co., Philadelphia, Pa.  
 Hollow Center—Clement Restein Co., Philadelphia, Pa.  
 Holmes—Holmes Metallic Packing Co., Wilkesbarre, Pa.  
 Hub—Geo. W. Knowlton Rubber Co., Boston, Mass.  
 Hydro—Johns-Manville, Inc., New York.  
 ♦ Ideal—General Asbestos & Rubber Co., Charleston, S. C.  
 Ideal—Ideal Metallic Packing Co., South Stillwater, Minn.  
 ♦ Improved—General Asbestos & Rubber Co., Charleston, S. C.  
 ♦ Indestructible—Combination Rubber Co., Bloomfield, N. J.  
 I. X. L.—Chas. Nuhring & Bro., Cincinnati, O.  
 J. B. H.—The Jas. B. Hunt Mfg. Co., Trenton, N. J.  
 Janas Asbestos Co., New York, N. Y.  
 Jerome Metallic Packing Co., Chicago, Ill.  
 John Crane—Crane Packing Co., The, Chicago, Ill.  
 J. M. Duro—Johns-Manville, Inc., New York.  
 J. M. Sea Ring—Johns-Manville, Inc., New York.  
 Johnson's—Henry Johnson Co., Jersey City, N. J.  
 K. C.—Kansas City Rubber & Belting Co., Kansas City, Mo.  
 K. P.—Keys Piston Ring Co., St. Louis, Mo.  
 Kearsage—Johns-Manville, Inc., New York.  
 Keasbey & Mattison Co., Ambler, Pa.  
 Knowlton—Geo. W. Knowlton Rubber Co., Boston.  
 Knowlton—Lubron Co., The, Everett, Mass.  
 Kobold—Kobold Sales Co., New Orleans, La.  
 ♦ Krussader—Quaker City Rubber Co., Philadelphia, Pa.  
 Lane—Fox Bros. & Co., New York, N. Y.  
 La Favorite Rubber Mfg. Co., Paterson, N. J. (Trade names—Mastinite, Nusolite Nus Kiro, Soma, La Favorite Interlocking Corner, Hawthorne, Marvel, Double Angle, Solid Diagonal Protected, Solid Diagonal Jacketed, Itsago.)  
 Leak-Proof—McQuay-Norris Mfg. Co., St. Louis, Mo.  
 Lindon—Henry Johnson Co., Jersey City, N. J.  
 Lion—James Walker & Co., Ltd., New York, N. Y.  
 Lubricating Metal Co., New York, N. Y.  
 Lubrobestos—A. W. Chesterton Co., Boston, Mass.  
 Lubron—Lubron Co., The, Everett, Mass.  
 Lubron—Knowlton Packing Co., Inc., Newtonville, Mass.  
 ♦ Madoe—Quaker City Rubber Co., Philadelphia, Pa.  
 Magneto—Randolph Brandt, New York, N. Y.  
 Metal Prince—Dominion Asbestos & Rubber Corp., New York.  
 Metal-Wove—A. W. Chesterton Co., Boston, Mass.  
 ♦ Micado—Quaker City Rubber Co., Philadelphia, Pa.  
 Mica Para—Curry Bros. Oil Co., Boston, Mass.  
 Mohawk—John M. Watts Sons, Philadelphia, Pa.  
 Mohican—Manhattan Rubber Mfg. Co., New York.  
 Monarch—A. W. Chesterton Co., Boston, Mass.  
 Morland—Henry Johnson Co., Jersey City, N. J.  
 M. R. Co.—Maquire Rubber Co., New York, N. Y.  
 Nemo—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Nonpariel-Oil Proof—John M. Watts Sons, Philadelphia, Pa.  
 ♦ Norwood—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Nox-all—Boston Belting Corp., Boston, Mass.  
 Nugget—Nugget Packing Co., Boston, Mass.  
 ♦ Old Crow, Norka, Norka Asb—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ O. I. M.—Home Rubber Co., Trenton, N. J.  
 O'Meara's Tubular—J. O'Meara, Inc., New York.  
 ♦ Ovalhole—Hollow Center Packing Co., Cleveland, O.  
 ♦ Palco, Palmetto—Greene, Tweed & Co., New York, N. Y.  
 Paragon—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Parante—Manhattan Rubber Mfg. Co., The, Passaic, New York, N. Y.  
 Paradago—John M. Watts Sons, Philadelphia, Pa.  
 Paragon—Montgomery Bros., Inc., Philadelphia, Pa.  
 Perfect Seal—Redin Ekstrom & Co., Rockford, Ill.  
 Perfection Tire & Rubber Co., Wabash, Ind.  
 Perry—La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Phoenix—Phoenix Steam Pkg. Co., Jersey City, N. J.  
 Phoenix—The Henry M. Johnson Co., Jersey City, N. J.  
 Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Pioneer—Cancos Mfg. Co., Philadelphia, Pa.  
 P.P.P.—Quaker City Rubber Co., Philadelphia, Pa.  
 Premier—Mulconroy Co., Inc., Philadelphia, Pa.  
 Pressure Proof—A. W. Chesterton Co., Boston, Mass.  
 Pyramid—Cancos Mfg. Co., Philadelphia, Pa.

Quaker City—Quaker City Rubber Co., Philadelphia.  
 Raco—Robt. A. Keasbey Co., New York, N. Y.  
 ♦ Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.  
 Red Core—Crandall Packing Co., Palmyra, N. Y.  
 Redin, Ekstrom & Co., Rockford, Ill. (ring).  
 Red Jacket—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Regent—Dominion Asbestos & Rubber Corp., New York.  
 Reindeer—The Pennsylvania Rubber Co., Jeannette, Pa.  
 Reliance—Pittsburgh Steam Packing Co., Pittsburgh, Pa.  
 ♦ Republic Rubber Corp., The, Youngstown, O.  
 Restein, Clement Co., Philadelphia, Pa.  
 Ringlock—John F. Walsh, Chicago, Ill.  
 Rodese—Acme Packing & Rubber Co., Philadelphia.  
 Rodtite—Dominion Asbestos & Rubber Corp., New York.  
 Romora—Henry Johnson Co., Jersey City, N. J.  
 Royal, Runio—Consolidated Rubber Co., Trenton, N. J.  
 Rubberbestos—A. W. Chesterton Co., Boston, Mass.  
 Safety—Steel Mill Packing Co., Detroit, Mich.  
 Salco Cross-Expansion—W. H. Salisbury & Co., Chicago, Ill.  
 Salisbury, W. H., & Co., Inc., Chicago, Ill.  
 Selden's—Randolph Brandt, New York, N. Y.  
 Selector—Maguire Rubber Co., New York, N. Y.  
 ♦ Semibronze—General Asbestos & Rubber Co., Charleston, S. C.  
 Senate—Pacific Coast Rubber & Sup. Co., San Francisco, Cal.  
 Shookum—Pioneer Rubber Mills, San Francisco, Cal.  
 Smoky City—American Steam Packing Co., Boston.  
 Smoky City—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Smoky City—W. D. Allen Mfg. Co., Chicago, Ill.  
 Sovereign—Dominion Asbestos & Rubber Corp., New York.  
 Spartan—Goodall Rubber Co., Philadelphia, Pa.  
 Special Marine—Steam Supply & Rubber Co., Seattle, Wash.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 ♦ Standard—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Star Oil-Proof—Consolidated Rubber Co., Trenton, N. J.  
 Sterling—Montgomery Bros., Inc., Philadelphia, Pa.  
 Stokes Rubber Co., The Joseph W., Trenton, N. J.  
 Strong's—Strong Machinery & Supply Co., New York.  
 ♦ Sumter—General Asbestos & Rubber Co., Charleston, S. C.  
 Sunset—A. W. Chesterton & Co., Boston, Mass.  
 Superheat—Asbestos & Rubber Works of America, New York, N. Y.  
 Superior—Consolidated Rubber Co., Trenton, N. J.  
 Surprise—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Titan, XX—Diamond Rubber Co., Inc., Akron, O.  
 Tribune—Continental Rubber Works, Erie, Pa.  
 Tuck's—American Steam Packing Co., Boston.  
 ♦ Tucks—A. W. Chesterton Co., Boston, Mass.  
 ♦ Tuck's—Combination Rubber Mfg. Co., Bloomfield, N. J.  
 ♦ Tucks—N. Y. Belting & Packing Co., Ltd., New York.  
 Tucks—New York Rubber Co., New York, N. Y.  
 Tucks—The Diamond Rubber Co., Akron, O.  
 United & Globe Rubber Mfg. Co., Trenton, N. J.  
 ♦ Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Acme, Amazon, Black Hawk, Faultless, Marco, Peerless, Rainbesto, Regular, Reliance, Samson, Vanda, Wizard.  
 Universal—Boston Belting Corp., Boston, Mass.  
 Vaco—Vulcan Asbestos Mfg. Co., Inc., New York, N. Y.  
 ♦ Victor—General Asbestos & Rubber Co., Charleston, S. C.  
 Victor—Montgomery Bros., Inc., Philadelphia, Pa.  
 Victor—Pioneer Rubber Mills, San Francisco, Cal.  
 ♦ Vulcan—New York Belting & Packing Co., Ltd., New York, N. Y.  
 Vulcan—Vulcan Asbestos Mfg. Co., Inc., New York.  
 Waldo—The Henry Johnson Co., Jersey City, N. J.  
 Watson, H. F., Erie, Pa.  
 Watts—John M. Watts Sons, Philadelphia, Pa.  
 Wearwell Gasket & Packing Co., Camden, N. J.  
 Western Rubber Co., Goshen, Ind.  
 White Beauty—Union Asbestos & Rubber Co., Trenton, N. J.  
 White City—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 ♦ White Diamond—The Combination Rubber Co., Bloomfield, N. J.  
 White Dove—Cancos Mfg. Co., Philadelphia, Pa.  
 White Squadron—Cancos Mfg. Co., Philadelphia, Pa.  
 Wise & Bailey, Philadelphia, Pa.  
 X. L. C. R.—Montgomery Bros., Inc., Philadelphia, Pa.  
 Young, C. C., Jersey Shore, Pa.  
 Zena—Randolph Brandt, New York, N. Y.

## PACKING, PLUMBAGO.

American Steam Packing Co., Boston, Mass.  
 Boston Belting Corp., Boston, Mass.



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Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
Dominion—Dominion Asbestos & Rubber Corp., New York.  
Double Service Packing Co., Philadelphia, Pa.  
Eureka—Eureka Packing Co., New York, N. Y.  
Gasco—Gasket Supply Co., Philadelphia, Pa.  
Gould's—Gould Packing Co., E. Cambridge, Mass.  
Hudson Mechanical Rubber Co., New York.  
Imperial—Boston Belting Corp., Boston, Mass.  
Liberty—Continental Rubber Works, Erie, Pa.  
Mohawk—John M. Watts Sons, Philadelphia, Pa.  
Smoky City—Piley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Stokes Rubber Co., The Joseph W., Trenton, N. J.  
♦ Usudurian—United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
Wicapee—New York Rubber Co., New York, N. Y.  
Wise & Bailey, Philadelphia, Pa.

## PACKING, PUMP.

American Vulcanized Fibre Co., Wilmington, Del.  
♦ Belmont—Belmont Packing & Rubber Co., Philadelphia, Pa.  
Boston Belting Corp., Boston, Mass.  
Cassco Bar—Metallic Packing Co., Chicago, Ill.  
Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
Crandall Packing Co., Palmyra, N. Y.  
Danubii Co., New York, N. Y.  
Dixie—The Dixie Packing Co., Atlanta, Ga.  
♦ Dixie, Hecla, Bronze, Hecla, Semihecla—General Asbestos & Rubber Co., Charleston, S. C.  
Double Service Packing Co., Philadelphia, Pa.  
Eureka—Eureka Packing Co., Sales Dept., New York, N. Y.  
Dominion Asbestos & Rubber Corp., New York.  
Excelsior Valve Co., New York, N. Y.  
Giant—Revere Rubber Co., Boston, Mass.  
Goetze Gasket & Packing Co., New Brunswick, N. J.  
Gould's—Gould Packing Co., E. Cambridge, Mass.  
Gutta Percha & Rubber Mfg. Co., New York.  
Hi-Fresh—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Ideal—Lake Erie Mfg. Co., Inc., Buffalo, N. Y.  
Improved—A. W. Chesterton Co., Boston, Mass.  
John Crane—Crane Packing Co., Chicago, Ill.  
Jones Packing Co., New York.  
Knowlton—Geo. W. Knowlton Rubber Co., Boston.  
Kobold—Kobold Sales Co., New Orleans, La.  
Krome—Chicago Rawhide Co., The, Chicago, Ill.  
Mabbs—Mabbs Hydraulic Packing Co., Chicago, Ill.  
Marsh, Chas. W., Muskegon, Mich.  
Martell Packings Co., Elyria, O.  
98 Stitched—Zenith Supply Co., The, Chicago, Ill.  
♦ Ovalhole—Hollow Center Packing Co., Cleveland, O.  
P. P. P.—Quaker City Rubber Co., Philadelphia, Pa.  
Sallisbury, W. H., & Co., Inc., Chicago, Ill.  
Shawmut—Revere Rubber Co., Chelsea, Mass.  
Standard Packing Co., Marion Bldg., Cleveland, O.  
Superfine—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Sutherland Leather & Felt Co., Detroit, Mich.  
Wolverine Brass Works, Grand Rapids, Mich.  
XXX—W. H. Salisbury & Co., Inc., Chicago, Ill.

## PACKING, RAWHIDE.

(See "Packing, Hydraulic, Leather.")

## PACKING, RING.

(See "Packing, Piston.")

## PACKING, SEWET, ASBESTOS.

A-B-C—American Brake Lining Co., Lansdale, Pa.  
Asbestos Textile Co., Inc., New York, N. Y.  
Asbestos & Rubber Works of America, New York.  
Ames Alloy—U. S. Indestructible Gasket Co., New York, N. Y.

Armor—Vulcan Asbestos Mfg. Co., Inc., New York.  
Armada—Schultz Patent Rubber Co., Philadelphia, Pa.  
Artesian—Adkins Young & Allen Co., Chicago, Ill.  
Asbestos Fibre Spinning Co., North Wales, Pa.  
Asbo—W. H. Salisbury & Co., Inc., Chicago, Ill.  
Auto—A. W. Chesterton Co., Boston, Mass.  
Blubest—Steam Supply & Rubber Co., Seattle, Wash.  
Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
Buffalo Weaving & Belting Co., Buffalo, N. Y.  
♦ Calbestos—General Asbestos & Rubber Co., Charleston, S. C.  
Cancos—Cancos Mfg. Co., Philadelphia, Pa.  
Carey—The Philip Carey Co., Cincinnati, O.  
Consolidated—Consolidated Packing & Supply Co.  
Darcoid—Dominion Asbestos & Rubber Corp., New York.  
Demon—Hart Packing Co., Boston, Mass.  
Dealers' Steam Packing Co., The, Palmyra, N. Y.  
Dominion Asbestos & Rubber Corp., New York, N. Y.  
Double Service—Double Service Packing Co., Inc., Philadelphia, Pa.  
♦ Durabla—Durabla Mfg. Co., New York, N. Y.  
Duraco—United States Asbestos Co. of Illinois, Chicago, Ill.  
♦ Duro, Kearsarge, Vulcabeston—Johns-Manville, Inc., New York.  
Eagle—Eagle Packing & Rubber Co., Inc., New York, N. Y.  
Eagleine—Eagle Oil & Supply Co., Boston, Mass.  
Essex Rubber Co., Inc., Trenton, N. J.  
Eternite—Asbestos & Rubber Works of America, New York.  
♦ Everlast—Goodyear Tire & Rubber Co., Akron, O.  
Everoid—Thermoid Rubber Co., Trenton, N. J.  
Everette—Rebele, L. J., New York, N. Y.  
♦ Falcon—Goodrich Rubber Co., B. F., Akron, O.  
Flangetite—Dominion Asbestos & Rubber Corp., New York.  
Franklin Mfg. Co., Franklin, Pa.  
Garlock—The Garlock Packing Co., Palmyra, N. Y.  
Gasco—Gasket Sup. Co., Philadelphia, Pa.  
Gladiator—New Jersey Asbestos Co., Camden, N. J.  
Globe Tire & Rubber Co., Philadelphia, Pa.  
Graft—Dominion Asbestos & Rubber Corp., New York.  
Gratone—Wilder Mfg. Co., St. Louis, Mo.  
Greenblatt Asbestos Mfg. Co., Inc., New York, N. Y.  
Herculite—Asbestos & Rubber Works of America, New York.  
Hudson High Pressure—Hudson Mechanical Rubber Co., New York, N. Y.  
Indestructene—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
Janos Asbestos Co., New York.  
Keasbey & Mattison Co., Ambler, Pa.  
Kerbaux—Kerbaux Co., New York, N. Y.  
Klingtite—Rebele, L. J., New York, N. Y.  
Klingtite—U. S. Indestructible Gasket Co., New York, N. Y.  
Kobold—Kobold Sales Co., New Orleans, La.  
Lion—James Walker & Co., Ltd., New York, N. Y.  
♦ Lubrobestos—A. W. Chesterton Co., Boston, Mass.  
Marold—L. J. Rebele, New York, N. Y.  
Motobestos—Asbestos & Rubber Works of America, New York.  
New Red—Geo. W. Holland, New York.  
New Jersey Asbestos Co., New York.  
♦ Ovalhole—Hollow Center Packing Co., Cleveland, O.  
♦ Parabestos—General Asbestos & Rubber Co., Charleston, S. C.  
♦ Peerless—United States Rubber Co., Mechanical Goods Div., New York.  
♦ Petrobestos—General Asbestos & Rubber Co., Charleston, S. C.  
Petrolite—Dominion Asbestos & Rubber Corp., New York.  
Philknob—P. W. Koebig, New York, N. Y.



- Purebestos—Wilder Mfg. Co., St. Louis, Mo.  
 ♦ Pyroid—General Asbestos & Rubber Co., Charleston, S. C.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Raybestos—Raybestos Co., The Bridgeport, Conn.  
 ♦ Red Wing—Goodyear Tire & Rubber Co., Akron, O.  
 Rex—Crandall Packing Co., Palmyra, N. Y.  
 Russo—A. W. Chesterton Co., Boston, Mass.  
 Sall Mountain Asbestos Mfg. Co., Chicago, Ill.  
 Servitor—Kern Commercial Co., New York.  
 Shur Joint—Union Rubber & Asbestos Co., Trenton, N. J.  
 Sovereign—Dominion Asbestos & Rubber Corp., New York.  
 Sparkite—U. S. Indestructible Gasket Co., New York.  
 Square Deal—Huhn Mfg. Co., New York.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Sta-Tite—Imperial Packing Corp., New York, N. Y.  
 Steamtite—Federal Asbestos Co., Paterson, N. J.  
 Super Compressed—E. A. Wilcox Mfg. Co., Chicago, Ill.  
 Superheat—The B. F. Goodrich Co., Akron, O.  
 Superx—E. A. Wilcox Mfg. Co., Chicago, Ill.  
 Tisafine—The Strong Machinery & Supply Co., New York.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 Urac—Union Rubber & Asbestos Co., Trenton, N. J.  
 Usaco—United States Asbestos Co., Mannheim, Pa.  
 ♦ Vanda—United States Rubber Co., Mechanical Goods Div., New York.  
 Vulcan—Vulcan Asbestos Mfg. Co., Inc., New York.  
 ♦ Wampus—Cincinnati Rubber Mfg. Co., Cincinnati, O.

#### PACKING, SHEET, ASBESTOS AND RUBBER, METAL OR WIRE INSERTION.

- Armorite—Vulcan Asbestos Mfg. Co., Inc., New York, N. Y.  
 Artesian—Adkins, Young & Allen Co., Chicago, Ill.  
 ♦ Asbestos-Metallic—New York Belting & Packing Co., New York, N. Y.  
 ♦ Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Boston Belting Corp., Boston, Mass.  
 Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
 Buffalo Weaving & Belting Co., Buffalo, N. Y.  
 ♦ Calibestos—General Asbestos & Rubber Co., Charleston, S. C.  
 Combination—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Danubill—Danubill Co., Inc., New York, N. Y.  
 Dealers' Steam Packing Co., The Palmyra, N. Y.  
 Dominion—Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Durobestos—Albion Mfg. Co., Seattle, Wash.  
 Ebonite—Quaker City Rubber Co., Philadelphia, Pa.  
 Eagleline—Eagle Oil & Supply Co., Boston, Mass.  
 ♦ Fire—New York Belting & Packing Co., New York.  
 Flangetite—Dominion Asbestos & Rubber Corp., New York.  
 G-P—Gutta Percha & Rubber Mfg. Co., New York.  
 ♦ Goodyearite—The Goodyear Tire & Rubber Co., Akron, Ohio.  
 Gould's—Gould Packing Co., E. Cambridge, Mass.  
 Grafte—Dominion Asbestos & Rubber Corp., New York.  
 Hi Degree—Metric Packing Co., Inc., Buffalo, N. Y.  
 ♦ Hollow Center Packing Co., Cleveland, O.  
 Janos—Janos Asbestos Co., New York, N. Y.  
 ♦ Jenarco—Jenkins Bros., New York, N. Y.  
 ♦ Jenkins 96—Jenkins Bros., New York, N. Y.  
 Johns-Pratt Co., Hartford, Conn.  
 Metal-Asbesto—A. W. Chesterton Co., Boston, Mass.  
 ♦ Metalloid—General Asbestos & Rubber Co., Charleston, S. C.  
 ♦ Paramo—United States Rubber Co., Mechanical Goods Div., New York.  
 Perfection Tire & Rubber Co., Wabash, Ind.  
 Perry—La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Petrolite—Dominion Asbestos & Rubber Corp., New York.  
 ♦ Rainbow—United States Rubber Co., Mechanical Goods Div., New York.  
 Regent—Dominion Asbestos & Rubber Corp., New York.  
 Rubberbestos—A. W. Chesterton Co., Trenton, N. J.  
 ♦ Salamanda—New York Belting & Packing Co., New York, N. Y.  
 ♦ Semibronze—General Asbestos & Rubber Co., Charleston, S. C.  
 Sovereign—Dominion Asbestos & Rubber Corp., New York.  
 "Square Deal"—Huhn Mfg. Co., Arlington, N. J.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Stokes Rubber Co., The Joseph W., Trenton, N. J.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 ♦ Usudurian—United States Rubber Co., Mechanical Goods Div., New York.  
 Vulcan—Vulcan Asbestos Mfg. Co., Inc., New York.  
 Vulcabeston—Johns-Pratt Co., Hartford, Conn.  
 Walker, James, & Co., Ltd., New York, N. Y.

#### PACKING, SHEET, FIBRE. (For Superheated Steam.)

- A-B-C—American Brake Lining Co., Lansdale, Pa.  
 Americanite—American Steam Packing Co., Boston, Mass.  
 Darcoide—Dominion Asbestos & Rubber Corp., New York.  
 Durabia Mfg. Co., New York, N. Y.  
 Dominion—Dominion Asbestos & Rubber Corp., New York.  
 Endura Mfg. Co., Philadelphia, Pa.  
 Eureka Packing Co., New York, N. Y.  
 Fibre Finishing Co., Boston, Mass.  
 Flangetite—Dominion Asbestos & Rubber Corp., New York.  
 Grafte—Dominion Asbestos & Rubber Corp., New York.  
 Hollow Center Packing Co., Cleveland, Ohio.  
 Kern Commercial Co., New York, N. Y.  
 Kobold Sales Co., New Orleans, La.  
 Niagratite—Niagara Falls Gasket & Packing Co., New York, N. Y.  
 Niagratite—U. S. Indestructible Gasket Co., New York, N. Y.  
 Petrola—Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Philkob—James I. Brown, New York, N. Y.  
 Rebele, L. J., Inc., New York.  
 Sovereign—Dominion Asbestos & Rubber Corp., New York.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 ♦ Vanda—United States Rubber Co., Mechanical Goods Div., New York, N. Y.

#### PACKING SHEET, RUBBER.

- A.C.L.—Western Rubber Co., Goshen, Ind.  
 Acme—The Acme Rubber Mfg. Co., Trenton, N. J.  
 Adamite—Consolidated Packing & Supply Co., New York, N. Y.  
 Advance—Advance Packing & Supply Co., Chicago, Ill.  
 Advance—Consolidated Rubber Co., Trenton, N. J.  
 Akron—The B. F. Goodrich Co., Akron, O.  
 Albion—Albion Mfg. Co., Seattle, Wash.  
 Alligator—Henry Johnson Co., Jersey City, N. J.  
 Anchor Packing Co., The, Philadelphia, Pa.  
 Aquaduct—Curry Brothers Oil Co., Boston, Mass.  
 ♦ Aurora—General Asbestos & Rubber Co., Charleston, S. C.  
 Aute—Osgood Sayen, Philadelphia, Pa.  
 A. Y. A.—Adkins, Young & Allen Co., Chicago, Ill.  
 ♦ Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Black-Bestos—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Black Diamond—Boston Belting Co., Boston, Mass.  
 Black Jack—Mulconroy Co., Inc., Philadelphia, Pa.  
 Black Jack—Henry Johnson Co., Jersey City, N. J.  
 Black Squadron—Caneos Mfg. Co., Philadelphia, Pa.  
 Black Velvet, No-Leak, Grapho, Red Velvet, Servo—Cincinnati Gasket & Packing Co., Cincinnati, O.  
 Blue Diamond—The Combination Rubber Co., Bloomfield, N. J.  
 Bluestone—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Bramold—Maquire Rubber Co., New York, N. Y.  
 Brandon—Henry Johnson Co., Jersey City, N. J.  
 Brown—F. H. Brown Packing Co., Philadelphia, Pa.  
 Buffalo—Buffalo Packing & Rubber Co., Buffalo, N. Y.  
 ♦ Calibestos—General Asbestos & Rubber Co., Charleston, S. C.  
 Capitol—Acme Rubber Mfg. Co., The, Trenton, N. J.  
 Cardinal—Manhattan Rubber Mfg. Co., Passaic, N. J.  
 Carspring—New Jersey Car Spring & Rubber Co., Jersey City, N. J.  
 C.B.S.—Western Rubber Co., Goshen, Ind.  
 Centaur—Maquire Rubber Co., New York, N. Y.  
 Century—The Pennsylvania Rubber Co., Jeannette, Pa.  
 Cesco—Chicago Engineer Supply Co., Chicago, Ill.  
 Clearmont—Hudson Mechanical Rubber Co., New York.  
 Congo—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Congress—Maquire Rubber Co., New York, N. Y.  
 Consolidated—Consolidated Packing & Supply Co., New York, N. Y.  
 Continental—Wise & Bailey, Philadelphia, Pa.  
 C O P Dichtungsgummi—The Strong Machinery & Supply Co., New York, N. Y.  
 C.O.S.—Western Rubber Co., Goshen, Ind.  
 Crandall's Kymol—Crandall Packing Co., Palmyra, N. Y.  
 Crucible—Union Rubber & Asbestos Co., Trenton, N. J.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Defender—Woven Steel Hose & Rubber Co., Trenton, N. J.  
 ♦ Delta—Quaker City Rubber Co., Philadelphia, Pa.  
 Diamond—W. D. Allen Mfg. Co., Chicago, Ill.  
 Dirigo Red—John M. Watts Sons, Philadelphia, Pa.  
 Dominion—Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Durst Mfg. Co., The, New York, N. Y.  
 Eagleline—Eagle Oil & Supply Co., Boston, Mass.

- ◆ Ebona—The Republic Rubber Co., Youngstown, O.
- ◆ Ebonite—Quaker City Rubber Co., Philadelphia, Pa.
- ◆ Electric—United & Globe Rubber Mfg. Co., Trenton, N. J.
- Elkhart Rubber Works, Elkhart, Ind.
- El Rey—W. H. Salisbury & Co., Inc., Chicago, Ill.
- Emblem—Maquire Rubber Co., New York, N. Y.
- Empire, Perfect—Empire Tire & Rubber Corp., Trenton, N. J.
- Enterprise—Wise & Bailey, Philadelphia, Pa.
- Essex—Essex Rubber Co., Trenton, N. J.
- Ethiopia—Crandall Packing Co., Palmyra, N. Y.
- Eureka—Eureka Packing Co., Sales Dept., New York
- Faust, Hero, Alabama, Perfect—Empire Tire & Rubber Corp., Trenton, N. J.
- Fibo—Asbestos Fibre Spinning Co., North Wales, Pa.
- Franklin—Wise & Bailey, Philadelphia, Pa.
- Garlock—The Garlock Packing Co., Palmyra, N. Y.
- Genesee—Consolidated Rubber Co., Trenton, N. J.
- ◆ Gibraltar—New Jersey Car Spring & Rubber Co., Jersey City, N. J.
- ◆ Gibraltar—New Jersey Asbestos Co., Camden, N. J.
- ◆ Globe Black—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Goodyear Tire & Rubber Co., Akron, O.
- Goulds—The Gould Packing Co., E. Cambridge, Mass.
- Guardian—Pioneer Rubber Mills, San Francisco, Cal.
- G. W. K.—Geo. W. Knowlton Rubber Co., Boston.
- ◆ Hamilton Rubber Mfg. Co., Trenton, N. J.
- Heat Proof—The Henry Johnson Co., Jersey City, N. J.
- Hendrie, W. C., Rubber Co., Torrance, Cal.
- Hercules—Quaker City Rubber Co., Philadelphia, Pa.
- Hercules—Vulcan Asbestos Mfg. Co., Inc., New York
- Hewitt Black—Hewitt Rubber Co., Buffalo, N. Y.
- ◆ Home Rubber Co., Trenton, N. J. Trade names—N. B. O., Red Rose, Red Sheet, Sterling Red Sheet, Solar Compressed Fibre Sheet, White Cross Plumbago Sheet.
- Hopaco—Hollow Center Packing Co., Chicago, Ill.
- Hub—Geo. W. Knowlton Rubber Co., Boston.
- Hudson—Hudson Mechanical Rubber Co., New York.
- Hudsonil—Danuhli Co., New York, N. Y.
- ◆ Indestructible—New York Belting & Packing Co., Ltd., New York, N. Y.
- Indian Red—The Diamond Rubber Co., Akron, O.
- ◆ Indigo—New Jersey Car Spring & Rubber Co., Jersey City, N. J.
- I. X. L.—Chas. Nuhrling & Bro., Cincinnati, O.
- Janos—Janos Asbestos Co., New York, N. Y.
- ◆ J. M. Seigelite—Johns-Manville, Inc., New York, N. Y.
- ◆ Jenarco—Jenkins Bros., New York, N. Y.
- ◆ Jenkins 96—Jenkins Bros., New York, N. Y.
- Johnson's—The Henry Johnson Co., Jersey City, N. J.
- ◆ Karbonite—New York Belting & Packing Co., Ltd., New York, N. Y.
- Klingelite—Crane Co., Chicago, Ill.
- Knowlton—Geo. W. Knowlton Rubber Co., Boston.
- Kobold—Kobold Sales Co., New Orleans, La.
- Liberty—Continental Rubber Works, Erie, Pa.
- ◆ Long Life—Voorhees Rubber Mfg. Co., Jersey City.
- ◆ Magic—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Magnolia—General Asbestos & Rubber Co., Charleston, S. C.
- ◆ Magnolia—Jenkins Bros., New York, N. Y.
- Maron—Buckley Rubber Co., J. W. New York, N. Y.
- Mascot—Consolidated Rubber Co., Trenton, N. J.
- Meeley—Meeley Rubber Co., Philadelphia, Pa.
- Mica Para—Curry Brothers Oil Co., Boston, Mass.
- ◆ Morocco—General Asbestos & Rubber Co., Charleston, S. C.
- National India Rubber Co., Bristol, R. I.
- New Red—Garrison Brass & Machine Works, New York, N. Y.
- New York Rubber Co., New York, N. Y.
- No-Leak—Cincinnati Gasket & Packing Co., Cincinnati, O.
- ◆ Norka—The Cincinnati Rubber Mfg. Co., Cincinnati.
- ◆ Nubian—Voorhees Rubber Mfg. Co., Jersey City, N. J.
- Nycord—The New York Cordage Co., New York, N. Y.
- ◆ Oelite—Jenkins Bros., New York, N. Y.
- Old Dominion—Dominion Asbestos & Rubber Corp., New York.
- ◆ Oelite—The Advance Packing & Supply Co., Chicago.
- Old Crow—The Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
- O. P.—Consolidated Packing & Supply Co., New York.
- Olympia—C. W. Trainer Mfg. Co., Boston, Mass.
- ◆ Olyproof—United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ Over-All—Voorhees Rubber Mfg. Co., Jersey City.
- ◆ Parabestos—General Asbestos & Rubber Co., Charleston, S. C.
- Paxtite—Pacific Coast Rubber & Sup. Co., San Francisco, Cal.
- ◆ Perfection—A. W. Chesterton Co., Boston, Mass.
- ◆ Permalite—H. W. Johns-Manville Co., New York.
- Perry—La Favorite Rubber Mfg. Co., Paterson, N. J.
- ◆ Petrobestos—General Asbestos & Rubber Co., Charleston, S. C.
- Phoenix—Henry Johnson Co., Jersey City, N. J.
- Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.
- Plum Para—The Mechanical Rubber Co., Chicago, Ill.
- Pyramid—Cancos Mfg. Co., Philadelphia, Pa.
- Pyramid—Gutta Percha & Rubber Mfg. Co., New York.
- ◆ Pyroid—General Asbestos & Rubber Co., Charleston, S. C.
- Rakco—Robt. A. Keasby Co., New York.
- ◆ Raven—The Manhattan Rubber Mfg. Co., Passaic, N. J.
- ◆ Redbestos—A. W. Chesterton Co., Boston, Mass.
- Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.
- Redbreast—Mercer Rubber Co., Hamilton Square, N. J.
- Red Jacket, Special Red—Gutta Percha & Rubber Mfg. Co., New York, N. Y.
- ◆ Red Oak—New Jersey Car Spring & Rubber Co., Jersey City, N. J.
- Red Raven—Kansas City Rubber & Belting Co., Kansas City, Mo.
- Red Rover—Wise & Bailey, Philadelphia, Pa.
- Red Sheet—Standard Packings Co., Cleveland, Ohio.
- Regina—Crandall Packing Co., Palmyra, N. Y.
- Reindeer—The Pennsylvania Rubber Co., Jeannette, Pa.
- Reliance—Pioneer Rubber Mills, San Francisco, Cal.
- Republic Rubber Co., The, Youngstown, O.
- Ridgewood—Gutta Percha & Rubber Mfg. Co., New York.
- Rivalte Superheat—The Strong Machinery & Supply Co., New York, N. Y.
- Royal—Consolidated Rubber Co., Trenton, N. J.
- ◆ Royal—The Cincinnati Rubber Mfg. Co., Cincinnati, O.
- ◆ Royal White—W. H. Salisbury & Co., Inc., Chicago, Ill.
- ◆ Ruby—New York Belting & Packing Co., Ltd., New York, N. Y.
- Runic—Consolidated Rubber Co., Trenton, N. J.
- Russo—A. W. Chesterton Co., Boston, Mass.
- Sahara—Crandall Packing Co., Palmyra, N. Y.
- Salisbury's Red—W. H. Salisbury & Co., Inc., Chicago.
- Schacht Rubber Mfg. Co., Huntington, Ind.
- ◆ Search Light—The Republic Rubber Corp., Youngstown, Ohio.
- ◆ Sembronze—General Asbestos & Rubber Co., Charleston, S. C.
- Servitor—Kern Commercial Co., New York, N. Y.
- Servo-Grapho—Cincinnati Gasket & Packing Co., Cincinnati, O.
- Silver Leaf—The Diamond Rubber Co., Akron, O.
- Skhil—Quaker City Rubber Co., Philadelphia, Pa.
- Smooth-On—Smooth-On Mfg. Co., Jersey City, N. J.
- Sovereign—Dominion Asbestos & Rubber Corp., New York.
- ◆ Special Red—New York Belting & Packing Co., New York.
- Special Red—The Pennsylvania Rubber Co., Jeannette, Pa.
- Standard Packings Co., Marion Bldg., Cleveland, O.
- Star Oil Proof—Consolidated Rubber Co., Trenton.
- Strong's—The Strong Machinery & Supply Co., New York, N. Y.
- ◆ Sunbeam—United & Globe Rubber Mfg. Co., Trenton, N. J.
- Sunset—Pioneer Rubber Mills, San Francisco, Cal.
- Sunset—Crescent Belting & Packing Co., Trenton, N. J.
- Superba—Curry Bros. Oil Co., Boston, Mass.
- Superheat—The Strong Machinery & Supply Co., New York, N. Y.
- Superior—Consolidated Rubber Co., Trenton, N. J.
- Trihune—Continental Rubber Works, Erie, Pa.
- ◆ Trimont—Thistle—Boston Belting Co., Boston, Mass.
- Triple Sheet—Gutta Percha & Rubber Mfg. Co., New York.
- Union Asbestos & Rubber Co., Chicago, Ill.
- ◆ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Bengal, Black Cross, Black Hawk, Cleo, Every Day, Gamet, Ogden, Paramo, Paxol, Red Crescent, Harlem, Pilot, Giant Red, Crescent, Genuine, Usudurian, Red Man, Revero, Saturn, Vanda.
- Usudurian Genuine—Revere Rubber Co., Boston, Mass.
- Vaco—Vulcan Asbestos Mfg. Co., Inc., New York.
- Volunteer, Elbon, Defiance, Indian Red—Diamond Rubber Co., Inc., Akron, Ohio.
- ◆ Voorhees Rubber Mfg. Co., Jersey City, N. J. Trade names—Bostwick, Cedar, Federal, Power, Union.
- ◆ Vulcaboston—Johns-Manville, Inc., New York.
- Vulcanite—Vulcan Asbestos Mfg. Co., Inc., New York.
- Wallabout—Gutta Percha & Rubber Mfg. Co., New York.
- Watts Oil Proof—John M. Watts Sons, Philadelphia.
- White Star—The R. F. Goodrich Co., Akron, O.
- Whitehead Bros. Rubber Co., Trenton, N. J.
- Woodward-Wanger Co., Philadelphia, Pa.

#### PACKING, SHEET, RUBBER, CLOTH INSERTION.

- ◆ Amazon—The Cincinnati Rubber Mfg. Co., Cincinnati.
- Bay City—Pioneer Rubber Mills, San Francisco, Cal.
- Champion—Boston Belting Corp., Boston, Mass.
- Consolidated—Consolidated Packing & Supply Co., New York, N. Y.
- Continental Rubber Works, Erie, Pa.
- Crescent, Roxbro—Boston Belting Corp., Boston, Mass.
- Crescent Rubber & Packing Co., Trenton, N. J.

Crown—Quaker City Rubber Co., Philadelphia, Pa.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Diamond Rubber Co., Inc., The, Akron, Ohio. Trade names—Clipper, Gulf, Indian Red.  
 Dominion—Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Edgewater—Quaker City Rubber Co., Philadelphia.  
 Empire Rubber Mfg. Co., Trenton, N. J.  
 Equality—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ Everday, Harlem—United States Rubber Co., Mechanical Goods Div., New York.  
 Fairbanks—Morse—Fairbanks, Morse & Co., Chicago.  
 Favorite—The Acme Rubber Mfg. Co., Trenton, N. J.  
 ♦ General Asbestos & Rubber Co., Charleston, S. C.  
 Gould's—Gould Packing Co., E. Cambridge, Mass.  
 G-P—Gutta Percha & Rubber Mfg. Co., New York.  
 Hercules—Quaker City Rubber Co., Philadelphia, Pa.  
 Heva—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Hewitt Rubber Co., Buffalo, N. Y.  
 ♦ Hollow Center Packing Co., Cleveland, O.  
 ♦ Home Rubber Co., Trenton, N. J.  
 Hudson—Hudson Mechanical Rubber Co., New York.  
 Indestructene—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Melville—Osgood Sayen, Philadelphia, Pa.  
 ♦ Missouri—The Cincinnati Rubber & Mfg. Co., Cincinnati, O.  
 Model—Mulconroy Co., Inc., Philadelphia, Pa.  
 Native—Pioneer Rubber Mills, San Francisco, Cal.  
 Nemo—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ New York Belting & Packing Co., Ltd., New York.  
 Perry, Itago—LaFavorite Rubber Mfg. Co., Paterson, N. J.  
 Pyramid—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Quaker City—Quaker City Rubber Co., Philadelphia.  
 Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.  
 Reliance—Pioneer Rubber Mills, San Francisco, Cal.  
 Ridgewood—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 ♦ Roxbro—Boston Belting Co., Boston, Mass.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.  
 Seal Rock—Pioneer Rubber Mills, San Francisco.  
 Selector—Maquire Rubber Co., New York, N. Y.  
 Special—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 ♦ Steam-Tight—The Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Vail Rubber Co., Chicago, Ill.  
 Viking—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Wabron-Vena—J. W. Buckley Rubber Co., New York, N. Y.  
 Wallabout—Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Whitehead Bros. Rubber Co., The, Trenton, N. J.  
 Woodward-Wanger Co., Philadelphia, Pa.

**PACKING, SLIP JOINT.**

The Martell Packing Co., Elyria, O.

**PACKING, SOAPSTONE.**

Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
 Double Service Packing Co., Philadelphia, Pa.  
 Miller's—Silver Lake Co., Boston, Mass.  
 Wise & Bailey, Philadelphia, Pa.

**PACKING, THERMOTTE.**

Belmont Packing & Rubber Co., Philadelphia, Pa.  
 B. & P.—New York Belting & Packing Co., New York.  
 ♦ Black Hawk—United States Rubber Co., Mechanical Goods Div., New York.  
 Boston Belting Corp., Boston, Mass.  
 Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
 ♦ Cobbs—New York Belting & Packing Co., New York.  
 Consolidated—Consolidated Packing & Supply Co., New York.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Eureka Packing Co., Sales Dept., New York, N. Y.  
 France Packing Co., The, Philadelphia, Pa.  
 Gasco—Gasket Supply Co., Philadelphia, Pa.  
 Gould's—Gould Packing Co., E. Cambridge, Mass.  
 Metric Packing Co., Inc., Buffalo, N. Y.  
 ♦ Semibronze, Hecla, Dixie, Metalloid—General Asbestos & Rubber Co., Charleston, S. C.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 Vanda—The Vanda Co., New York, N. Y.  
 Wise & Bailey, Philadelphia, Pa.

**PACKING, VALVE STEM.**

Alagestos—Consolidated Packing & Supply Co., New York, N. Y.  
 Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 Asbestos Fibre Spinning Co., North Wales, Pa.  
 Asbestos & Rubber Works of America, New York.  
 Bestalline—Advance Packing & Supply Co., Chicago, Ill.

Black Squadron—Cancos Mfg. Co., Philadelphia, Pa.  
 Blue Streak—Goodyear Tire & Rubber Co., Akron, O.  
 Brown, F. H., Packing Co., Inc., Philadelphia, Pa.  
 Buffalo—Buffalo Packing & Rubber Co., Buffalo, N. Y.  
 Canadax—H. W. Johns-Manville Co., New York, N. Y.  
 Canfield—H. O. Canfield Co., Bridgeport, Conn.  
 Cesco—Chicago Engineer Supply Co., Chicago, Ill.  
 ♦ Cobb, Crocoite, Graphon, B & P—Trade Names, New York Belting & Packing Co., New York.  
 Crandall's Rex—Crandall Packing Co., Palmyra, N. Y.  
 Dominion—Dominion Asbestos & Rubber Corp., New York.  
 Double Service Packing Co., Philadelphia, Pa.  
 Duraco—United States Asbestos Co. of Illinois, Chicago, Ill.  
 Durobestos—Albion Mfg. Co., Seattle, Wash.  
 Econo—Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Eureka Packing Co., Sales Dept., New York, N. Y.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 France Packing Co., The, Philadelphia, Pa.  
 Gasco—Gasket Supply Co., Philadelphia, Pa.  
 Globe—Hayden Supply Co., Grand Rapids, Mich.  
 Gould's—The Gould Packing Co., E. Cambridge, Mass.  
 Hi-Fresh—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Hi-Steam—Steel Mill Packing Co., Detroit, Mich.  
 Holmes—Holmes Metallic Packing Co., Wilkesbarre, Pa.  
 Hudson Mechanical Rubber Co., New York, N. Y.  
 Jerome Metallic Packing Co., Chicago.  
 John Crane—Crane Packing Co., Chicago, Ill.  
 Johnson's—Henry Johnson Co., Jersey City, N. J.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 Lubron—Lubron Co., The, Everett, Mass.  
 Lubesto—Johns-Manville Corp., New York, N. Y.  
 Martell Packings Co., Elyria, O.  
 Massaslot Mfg. Co., Fall River, Mass.  
 Metric Packing Co., Inc., Buffalo, N. Y.  
 Micobestos—Advance Packing & Supply Co., Chicago.  
 Mogul—Johns-Manville Corp., New York, N. Y.  
 Ogdan & Co., C. S., New York, N. Y.  
 ♦ Old Crow—Cincinnati Rubber Mfg. Co., Cincinnati, O.  
 ♦ Ovalhole—Hollow Center Packing Co., Cleveland, O.  
 P. & B.—Standard Paint Co., New York, N. Y.  
 Paine—Paine Metallic Packing Co., Shawanese, Pa.  
 ♦ Palmetto—Greene, Tweed & Co., New York, N. Y.  
 ♦ Perfect—General Asbestos & Rubber Co., Charleston, S. C.  
 Perfection Tire & Rubber Co., Wabash, Ind.  
 Phoenix—The Henry Johnson Co., Jersey City, N. J.  
 Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 P.P.P.—Quaker City Rubber Co., Philadelphia, Pa.  
 Red Bird—Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ Regal—Quaker City Rubber Co., Philadelphia, Pa.  
 Rodtite—Dominion Asbestos & Rubber Corp., New York.  
 S. P. C.—Standard Paint Co., New York, N. Y.  
 Safety—Steel Mill Packing Co., Detroit, Mich.  
 Salisbury, W. H. & Co., Inc., Chicago, Ill.  
 Standard Packings Co., Marion Bldg., Cleveland, O.  
 Steamtite—Federal Asbestos Co., Paterson, N. J.  
 Stempack—Goetze, Gasket & Packing Co., New Brunswick, N. J.  
 Target—E. A. Wilcox Mfg. Co., Chicago, Ill.  
 ♦ Turgo—New York Belting & Packing Co., New York.  
 Union Asbestos & Rubber Co., Chicago, Ill.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York.  
 Trade names—Black Hawk, Vanda, Rainbow, Oilpak, Wizard, Rain-Besto, Eclipse, Peerless Piston, Success, Cross Expansion, Lakeside, Hercules, Honest John, Crown, Peerless Special, Royal, Huron.  
 ♦ Valbestine—General Asbestos & Rubber Co., Charleston, S. C.  
 Valvolite—Quaker City Rubber Co., Philadelphia, Pa.  
 Vulcabeston—Johns-Manville Corp., New York.  
 Wise & Bailey, Philadelphia, Pa.

**PADS, FIREMEN'S LANDING.**

La Favorite—S. F. Hayward & Co., New York, N. Y.  
 N. J. Car Spring & Rubber Co., Jersey City, N. J.

**PADS, LUBRICATING, FELT.**

Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Hoffeld & Co. R., Buffalo, N. Y.  
 Lyons Felt Co., Brooklyn, N. Y.

**PAIS, CONTRACTORS' AND FOUNDRY.**

Iron Horse—Rochester Can Co., Rochester, N. Y.

**PAIS, FACTORY, FIBRE.**

Fibrotta—Cordley & Hayes, New York, N. Y.

**PAIS, FIRE.**

Foamite Firefoam Co., New York, N. Y.

**PAINT, ALUMINUM, BRONZE & GOLD.**

(See "Bronze Powders.")

Baer Bros., New York, N. Y.

Du Pont Chemical Works, New York, N. Y.  
International Smokeless Powder & Chemical Co., New York, N. Y.

#### PAINT, ASBESTOS.

Barber Asphalt Paving Co., The, Philadelphia.  
Bellweather—Acme Asbestos Covering & Supply Co., Chicago, Ill.  
Carey—The Philip Carey Co., Cincinnati, O.  
Chicago Fire Proof Covering Co., Chicago, Ill.  
Johns-Manville Corp., New York.  
Sall Mountain Co., Chicago, Ill.  
Sumac—The Johnson Compound & Supply Co., Rochester, N. Y.

#### PAINT, COLD WATER.

Peacock—The Klein Mfg. Co., Cleveland, O.  
M. Ewing Fox Co., New York. Trade names—Calcitine, Muralite, Permanite, Whiting.  
Standard Chemical Corp., Kalamazoo, Mich.

#### PAINT & WATERPROOF COATING FOR CONCRETE SURFACES.

Cementkote—Tropical Paint & Oil Co., Cleveland, Ohio.  
Concrete Clinch—M. L. Schleuter, Chicago, Ill.  
Damp Proof, Rex—The Flintkote Co., Boston, Mass.  
Degraco—Detroit Graphite Co., Detroit, Mich.  
Rinald Bros. Paint Works, Inc., Philadelphia, Pa.  
Rice's Granolith—United States Gutta Percha Paint Stonetex—The Truscon Laboratories, Detroit, Mich. Co., Providence, R. I.  
Truscon Floor Enamel—Truscon Laboratories, Detroit, Mich.

#### PAINT, FIRE & ACID PROOF.

Codd, Tank & Specialty Co., Baltimore, Md.  
Frost Paint & Oil Co., Minneapolis, Minn.

#### PAINT, MILL WHITE, FACTORY INTERIOR.

Acme—Acme Asbestos Covering & Supply Co., Chicago.  
Blue Ribbon White—The Truscon Laboratories, Detroit, Mich.  
Chaffee's Mill White—Thomas K. Chaffee Co., Providence, R. I.  
Connors, Wm., Paint Mfg. Co., The, Troy, N. Y.  
Detroit Graphite Co., Detroit, Mich.  
Elastikote—Tropical Paint & Oil Co., Cleveland, O.  
Federal Process Co., Cleveland, Ohio.  
Flat Wall Unicoat—Rinald Bros. Paint Works, Inc., Philadelphia, Pa.  
Florence—The W. Connors Paint Mfg. Co., Troy, N. Y.  
Fox, M. Ewing, Co., New York, N. Y.  
Fraser—Fraser Paint Co., Detroit, Mich.  
Hampden—Hampden Paint & Chemical Co., Springfield, Mass.  
♦ Johns-Manville, Inc., New York, N. Y.  
Liberty—Carter Paint Co., Liberty, Ind.  
Lowe Bros. Co., Dayton, Ohio.  
Mill White—The Lowe Bros. Co., Dayton, Ohio.  
More Lyte—Arlington Mfg. Co., The, Canton, O.  
Pecora Paint Co., Philadelphia, Pa.  
Rice's Mill White—United States Gutta Percha Paint Co., Providence, R. I.  
Sanatone—Thomson Wood Finishing Co., Philadelphia.  
Sta-White—Detroit Graphite Co., Detroit, Mich.  
Stalzon—Wm. T. Baker, Inc., Jersey City, N. J.  
Standard Chemical Corp., Kalamazoo, Mich.  
Sunshine—Wm. T. Baker, Inc., Jersey City, N. J.  
Thomson Wood Finishing Co., The, Philadelphia, Pa.  
Truscon Laboratories, Detroit, Mich.  
U. S. N.—Billings-Chapin Co., Cleveland, O.  
♦ Vertex—J. C. Whitlam Mfg. Co., Wadsworth, O.

#### PAINT, GRAPHITE AND ROOFING.

Acme White Lead & Color Works, Detroit, Mich.  
American Seal—The Wm. Connors Paint Mfg. Co., Troy, N. Y.  
Anchor, Crystal—Warren Chemical Div., The Barrett Co., New York.  
Arlington Mfg. Co., Canton, Ohio.  
Brush Coat—The Garnet Co., Allentown, Pa.  
Dixon Crucible Co., Joseph, Jersey City, N. J.  
Federal—Federal Graphite Mills, Cleveland, O.  
Genasco—The Barber Asphalt Paving Co., Philadelphia, Pa.  
Heppes-Nelson Roofing Co., Chicago, Ill.  
Kelley—Kelley Graphite Mills, New York, N. Y.  
Marley Pyramid—C. S. Garrett & Son Co., Philadelphia, Pa.  
Maire Paint Co., Minneapolis, Minn.  
Obermayer Co., The S., Cincinnati, O.  
Pecora—Pecora Paint Co., Philadelphia, Pa.  
Pyramid—C. S. Garrett & Son Co., Philadelphia, Pa.  
Roof Shield—Truscon Laboratories, Detroit, Mich.  
Sterling—L. Best Co., New York.  
U. S. G.—The U. S. Graphite Co., Saginaw, Mich.  
Whitlam, J. C., Mfg. Co., Wadsworth, O.

#### PAINT, HOT SURFACE.

Arnstein's—Eugene Arnstein, Inc., Chicago, Ill.

Des Moines Elaterite—Elaterite Paint & Mfg. Co., Des Moines, Iowa.  
Federal—Federal Process Co., Cleveland, O.  
Graphilatum—Klein Mfg. Co., Cleveland, O.  
National Roofing Co., Tonawanda, N. Y.  
Pyrolon—The Garland Co., Cleveland, O.  
Rex Superheat—The Flintkote Co., Boston, Mass.  
Standard—Standard Chemical Corp., Kalamazoo, Mich.  
Thomson Wood Finishing Co., Philadelphia, Pa.  
Tropolite—Tropolite Paint & Oil Co., Cleveland, Ohio.

#### PAINT INSULATING.

Frost Paint & Oil Co., Minneapolis, Minn.  
Rex Insulating—The Flintkote Co., Boston, Mass.

#### PAINT, FOR IRON WORK, BOILERS, MACHINERY, ETC.

Acme—Acme White Lead & Color Works, Detroit, Mich.  
Albion—Albion Mfg. Co., Seattle, Wash.  
American Seal—The Wm. Connors Paint Mfg. Co., Troy, N. Y.  
Apexor No. 3—Dampney Co. of America, Boston, Mass.  
Carbonelastic Coating—Arlington Mfg. Co., Canton, Ohio.  
Carpo—Du Pont Chemical Works, New York, N. Y.  
Ceresit—Ceresit Waterproofing Co., Chicago, Ill.  
Degraco—Detroit Graphite Co., Detroit, Mich.  
Des Moines—Elaterite Paint & Mfg. Co., Des Moines, Ia.  
Erie Metallic—Tropical Paint & Oil Co., The, Cleveland, Ohio.  
Etna—Walters Mfg. Co., Pittsburgh, Pa.  
Eureka—The Otley Paint Mfg. Co., Chicago, Ill.  
Filler—Thomson Wood Finishing Co., Philadelphia, Pa.  
Flexatite Fibrated—The Heppes-Nelson Roofing Co., Chicago, Ill.  
Fraser—Fraser Paint Co., Detroit, Mich.  
Frost's Kapak—Frost Paint and Oil Co., Minneapolis.  
F. S. Felton, Sibley Co., Philadelphia, Pa.  
Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.  
Graphilatum—The Klein Mfg. Co., Cleveland, O.  
Great Western Oil Co., The, Cleveland, O.  
High Standard—Lowe Bros. Co., The, Dayton, O.  
Hydo-Bar Waterproofing Co., New York, N. Y.  
Industrial Enamel—The Arco Company, Cleveland, O.  
Ironslides—The Ironslides Co., Columbus, O.  
J-M Boiler—Johns-Manville Corp., New York.  
Kaiser—Kobold Sales Co., New Orleans, La.  
Long Life—The Klein Mfg. Co., Cleveland, O.  
M. R. Paint—Thompson Wood Finishing Co., Philadelphia, Pa.  
Pecora—Pecora Paint Co., Philadelphia, Pa.  
P. & B.—The Standard Paint Co., New York, N. Y.  
Rex Preservative—The Flintkote Co., Boston, Mass.  
Rice's—United States Gutta Percha Paint Co., Providence, R. I.  
Richards—Wilson Pipe Covering Co., Grand Rapids, Mich.  
Ruskilla—Atlas Preservative Co. of America, Inc., New York, N. Y.  
Rustproof, Bessemer—Rinald Bros Paint Works, Inc., Philadelphia, Pa.  
Semet Solvay Co., Syracuse, N. Y. (machinery).  
S. P. C.—The Standard Paint Co., New York, N. Y.  
Staona—Wm. T. Baker, Inc., Jersey City, N. J.  
Stuckote—National Roofing Co., Tonawanda, N. Y.  
Thomson Wood Finishing Co., Philadelphia, Pa.  
Tropical Paint & Oil Co., Cleveland, Ohio.  
Truscon, Bar-Ox—The Truscon Laboratories, Detroit, Mich.  
Walters—Walters Mfg. Co., Pittsburgh, Pa.  
World Refining Co., Easton, Pa.  
Zarex—Flintkote Mfg. Co., Boston, Mass.

#### PANS, ACID AND ANNEALING.

Columbiana Boiler Co., Columbiana, Ohio.

#### PANS, DRIP.

Koven & Brother, L. O., Jersey City, N. J.  
Richmond Foundry & Mfg. Co., Richmond, Va.

#### PANS, LATH.

Biggs Boiler Works, The, East Akron, O.  
Champion—Western Tool & Mfg. Co., Springfield, O.  
Cleveland Wire Spring Co., Cleveland, O.  
Kirk & Blum Mfg. Co., Cincinnati, O.  
Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
Mullins Body Corp., Stamping Dept., A. Salem, O.  
Liberty—Carter Paint Co., Liberty, Ind.  
Littleford Bros., Cincinnati, O.  
Lowe Bros. Co., Dayton, O.  
New Britain—New Britain Machinery Co., The, New Britain, Conn.  
Ohio Mfg. Co., The, Painesville, O.  
Rex—The Flintkote Co., Boston, Mass.  
Roofkoter—Tropical Paint & Oil Co., Cleveland, O.  
Standard—Standard Stamping Co., Huntington, W. Va.  
Superior—Detroit Graphite Co., Detroit, Mich.  
Terrell's Equipment Co., Grand Rapids, Mich.



Warren Chemical Div., The Barrett Co., New York.  
Whitlam Mfg. Co., J. C., Wadsworth, O.

#### PANS, MORTAR.

Jackson Mfg. Co., Harrisburg, Pa.

#### PANS, SHOP AND ASSEMBLY.

Eklo—Edward Katzinger Co., Chicago, Ill.  
Kilbourne & Jacob Mfg. Co., Columbus, O.

#### PANS, VACUUM.

American Copper & Brass Works, Cincinnati, Ohio.  
Badger & Sons Co., E. B., Boston, Mass.  
Biggs Boiler Works, The, East Akron, O.  
Buffalo Forge Co., Buffalo, N. Y.  
Camden Copper Works, Inc., Camden, N. J.  
Dopp—Sowers Mfg. Co., Buffalo, N. Y.  
Elyria Enameled Products Co., Elyria, O.  
Harris, Arthur Co., Chicago, Ill.  
Improved Appliance Co., Brooklyn, N. Y.  
Koven, L. O., & Bro., Jersey City, N. J.  
National Gauge Co., Brooklyn, N. Y.  
Roturbo—Manistee Iron Works Co., Manistee, Mich.  
Sowers Mfg. Co., Buffalo, N. Y.  
♦ Valley Iron Works, Williamsport, Pa.  
Wheeler—Wheeler Condenser & Engineering Co., New York, N. Y.

#### PAPER, ASBESTOS.

Asbestos & Rubber Works of America, New York.  
Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
Carey—Philip Carey Mfg. Co., Cincinnati, O.  
Dominion Asbestos and Rubber Corp., New York.  
Ehret Magnesia Mfg. Co., Valley Forge, Pa.  
♦ General Asbestos & Rubber Co., Charleston, S. C.  
L. M. Crawford Asbestos Co., Denver, Colo.  
Johns-Manville, Inc., New York, N. Y.  
Keasbey Co., Robt. A., New York, N. Y.  
Kern Commercial Co., New York, N. Y.  
K. & M.—Keasbey & Mattison Co., Ambler, Pa.  
Lyon Metallic Mfg. Co., Aurora, Ill.  
Mikesell Brothers Co., Chicago, Ill.  
Montgomery Bros., Inc., Philadelphia, Pa.  
Norristown Magnesia & Asbestos Co., Norristown, Pa.  
Richards Mfg. Co., Grand Rapids, Mich.  
Sall Mountain Co., Chicago, Ill.  
Twin City Pipe Covering Co., Minnesota Transfer, Minn.  
Union Rubber & Asbestos Co., Trenton, N. J.  
Watson, H. F., Co., Erie, Pa.  
Western Asbestos & Mfg. Co., Denver, Colo.

#### PAPER, BUILDING AND SHEATHING.

Barber Asphalt Paving Co., Philadelphia, Pa.  
Barrett Mfg. Co., New York.  
Beloit Box Board Co., Beloit, Wis.  
Black Liberty—C. S. Garrett & Son Co., Philadelphia, Pa.  
Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
Cabot, Samuel, Boston, Mass.  
California Paper & Board Co., San Francisco, Cal.  
Diem & Wing Paper Co., Cincinnati, O.  
Ehret Magnesia Mfg. Co., Philadelphia, Pa.  
Galva-nite—Ford Roofing Products Co., Chicago, Ill.  
General Roofing Mfg. Co., Chicago, Ill.  
Hewitt, C. B., & Bros., New York.  
Hydrex, Novento—Hydrex Asphalt Products Corp., New York, N. Y.  
Johns-Manville, Inc., New York, N. Y.  
Lafin Paper Co., York, Pa.  
Lehon Co., The, Chicago, Ill.  
McHenry-Millhouse Mfg. Co., South Bend, Ind.  
Neponset—F. W. Bird & Son, East Walpole, Mass.  
Parchment—C. S. Garrett & Son Co., Philadelphia, Pa.  
Raw Hide—C. S. Garrett & Son Co., Philadelphia, Pa.  
Rex—The Flintkote Co., Boston, Mass.  
Seal-Skin—Lehon Co., The, Chicago, Ill.  
Susquehanna Roofing Mfg. Co., City, Pa.  
Union Roofing & Mfg. Co., St. Paul, Minn.  
Watson, H. F., Co., Erie, Pa.

#### PAPER AND CLOTH, SAND, EMERY, GARNET AND FLINT.

American Glue Co., Boston, Mass.  
Armour Sand Paper Works, Chicago, Ill. (Emery, flint, garnet, alundum and crystolon paper, cloth and discs.)  
Baeder, Adamson & Co., Philadelphia, Pa.  
Barton & Son Co., H. H., Philadelphia, Pa.  
Brooklyn, Caribcon, Empire, Ruby—Behr, Herman & Co., Inc., New York, N. Y.  
Carbolox—U. S. Sand Paper Co., Williamsport, Pa.  
Carborundum, Alomite—The Carborundum Co., Niagara Falls, N. Y.  
Cleveland Abrasive Wheel Co., The, Cleveland, O.  
♦ Crystal Bay, Superior Garnet, Three-M-ite, Tri-Mite, Wetordry, Autowet—Minnesota Mining & Mfg. Co., St. Paul, Minn.

Huberts—Montgomery & Co., Inc., New York, N. Y.  
♦ K-6—The Carborundum Co., Niagara Falls, N. Y.  
Ruff Stuff—Wausau Abrasives Co., Wausau, Wis.

#### PAPER, FILTER.

Shriver—Shriver, T., & Co., Harrison, N. J.

#### PAPER GASKET, TREATED.

Adpasco—Advance Packing & Supply Co., Chicago, Ill.

#### PAPER AND BOARD, STENCIL.

Bradley, A. J. Mfg. Co., New York, N. Y.

#### PAPER, TOILET.

A. P. W. Brand—A. P. W. Paper Co., Albany, N. Y.  
Morgan Envelope Co., Springfield, Mass.  
Northern Paper Mills, Green Bay, Wis.  
No Waste—National Paper Products Co., Carthage, N. Y.  
Ollwon Brand—A. P. W. Paper Co., Albany, N. Y.  
Sauquoit Toilet Paper Co., Inc., New Hartford, N. Y.  
Scott—Scott Paper Co., Chester, Pa.

#### PARALLELS, FLANER.

Herlith—O. B. Herlith Mfg. Co., Hartford, Conn.  
Simplex Tool Co., Woonsocket, R. I.  
Starrett Co., The, L. S., Athol, Mass.  
Walker, O. S., & Co., Worcester, Mass.

#### PARTING, FOUNDRY.

Hill & Griffith Co., Cincinnati, O.  
Radiant—Smith Facing & Supply Co., Cleveland, O.  
The Buckeye Products Co., Cincinnati, O.

#### PARTITIONS, STEEL, TOILET.

(See also "Stalls")

Columbiana Boiler Co., The, Columbiana, Ohio.  
Elkay Mfg. Co., Chicago, Ill.

#### PARTITIONS, WIRE, FACTORY.

Barshal Company, The, Cleveland, O.  
Cyclone Red Tag—Cyclone Fence Co., Waukegan, Ill.  
Fiske Iron Works, J. W., New York, N. Y.  
Tyler, The W. S., Co., Cleveland, O.

#### PASTE, DRY.

Asbestos—H. B. Fuller Co., St. Paul, Minn.

#### PATTERN FILLET, LEATHER AND WOOD.

Shanafelt Mfg. Co., Canton, O.

#### PATTERN LETTER AND PLATE PRESSES.

Roovers—Roovers Bros., Brooklyn, N. Y.

#### PATTERNS, METAL OR WOOD.

Baisley, John, Iron Works, Philadelphia, Pa.  
Berkshire Mfg. Co., The, Cleveland, O.  
Clark, H. W., Co., Mattoon, Ill.  
Cohoes Iron Foundry & Machine Co., Cohoes, N. Y.  
Elmes, Charles F., Engineering Work, Chicago, Ill.  
Estes, E. B., & Sons, New York, N. Y.  
Gilbert, A., & Sons Brass Foundry Co., St. Louis, Mo.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
Jurack, Chas., Co., The, Milwaukee, Wis.  
Klotz Machine Co., Sandusky, O.  
Knight, H. W., & Son, Seneca Falls, N. Y.  
Mann Corporation, Kankakee, Ill.  
Mehl—Mehl Machine Tool & Die Co., Roselle, N. J.  
Monarch Pattern Works, Detroit, Mich.  
Mummert-Dixon Co., Hanover, Pa.  
Newark Stamping & Foundry Co., The, Newark, O.  
Shanafelt Mfg. Co., The, Canton, O.  
Townsend Furnace & Machine Shop Co., Albany, N. Y.

#### PATERS, FITCH.

National Marine Lamp Co., New York, N. Y.

#### PEDESTALS, MOTOR.

General Electric Co., Schenectady, N. Y.

#### PEDESTALS AND FOOT RESTS, RADIATOR.

Atlas—Atlas Radiator Pedestal Co., Norwich, Conn.  
Capitol, Triton—U. S. Radiator Corp., Detroit, Mich.  
Concord—Union Radiator Co., Johnstown, Pa.  
Jennison Co., Fitchburg, Mass.  
National Radiator Co., Johnstown, Pa.  
Shirley Radiator & Foundry Co., Indianapolis, Ind.

#### PEGS, BELT, RAWHIDE.

Chicago Rawhide Mfg. Co., The, Chicago, Ill.  
♦ Clipper—Clipper Belt Lacer Co., Grand Rapids, Mich.  
Colonial Leather Co., Chicago, Ill.

**PEGS, RUBBER HEAD.**

Canfield Rubber Co., The, Bridgeport, Conn.

**PELOBUSES.**

Hand, John F., & Sons Co., Philadelphia, Pa.

**PENSTOCKS, STEEL AND WOOD.**

Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Kellogg Co., M. W., New York, N. Y.  
New York Central Iron Works Co., Inc., Hagerstown, Md.  
Pacific Coast Pipe Co., Seattle, Wash.  
Portland Co., The, Portland, Me.  
Ritter-Conley Co., Pittsburgh, Pa.  
Scannell Boiler Works, Lowell, Mass.  
Tippett & Wood, Phillipsburg, N. J.  
Trump—Trump Mfg. Co., Springfield, O.  
Walsh Boiler & Iron Works, Springfield, Mass.

**PERFORATED METAL.**

(See "Metals, Perforated.")

**PHOSPHORIZERS.**

Dixon Crucible Co., Joseph, Jersey City, N. J.  
McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

**PHOTOMETERS.**

Precision Instrument Co., Detroit, Mich.

**PICKERS, LOOM.**

Hervey—F. L. Hervey & Co., Inc., Fall River, Mass.  
Union Belt Co., Fall River, Mass.

**PICKERS, SLATE.**

Farrer—Scranton Steam Pump Co., Scranton, Pa.

**PICKS, CUPOLA.**

Milwaukee Tool & Forge Co., Milwaukee, Wis.

**PICKS, PUNCHES FOR COMPRESSED AIR MACHINES.**

Hardscog, Martin, Co., Pittsburgh, Pa.

**PICKS, MATTOCKS AND GRUB HOOKS.**

Alsteel—Boker Cutlery & Hardware Co., Inc., New York.  
American Axe & Tool Co., Glassport, Pa.  
American Shovel & Stamping Co., Lorain, O.  
Beall Bros., Alton, Ill.  
Fulton Tool Works, Canal Fulton, O.  
Hubbard & Co., Pittsburgh, Pa.  
Iron City Star—Iron City Tool Works, Pittsburgh, Pa.  
Jones & Laughlin Steel Co., Pittsburgh, Pa.  
Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
Klein-Logan Co., The, Pittsburgh, Pa.  
Leetonia Tool Co., The, Leetonia, Ohio.  
♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
Salem Tool Co., The, Salem, O.  
Union Drop Forge Co., Chicago, Ill.  
Verona Tool Works, Pittsburgh, Pa.  
Vulcan Tool Mfg. Co., The, Quincy, Mass.  
Warren Tool & Forge Co., The, Warren, Ohio.  
Warwood Tool Co., Wheeling, W. Va.  
♦ Wyoming Red Edge—The Wyoming Shovel Works, Wyoming, Pa.

**PICKS, MILL AND BOILER.**

Bradley's Sons, Westport, Conn.  
Heartley Machine, Variety Iron & Tool Works, Toledo, O.  
♦ Higgins, John C., Chicago, Ill.  
♦ Horseshoe—The Stanley Rule and Level Plant, Atha Dept., New Britain, Conn.  
Hubbard & Co., Pittsburgh, Pa.  
Iron City Star—Iron City Tool Wks., Ltd., Pittsburgh, Pa.  
Kern, O., Fleetwood, Pa.

**PIECES, EXTENSION, CLOSET.**

Rice—The Edward J. Rice Mfg. Co., Rochester, N. Y.

**PILE DRIVERS.**

American Hoist & Derrick Co., St. Paul, Minn.  
Brown Portable Elevator Co., Chicago, Ill.  
Browning—The Browning Co., Cleveland, O.  
Byers, John F., Machine Co., Ravenna, O.  
Carlin's, Thos., Sons Co., Pittsburgh, Pa.  
Clyde Iron Works, Duluth, Minn.  
Contractors' Plant Mfg. Co., Buffalo, N. Y.  
Ingersoll-Rand Co., New York, N. Y.  
Janney, Steinmetz & Co., Philadelphia, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Mead-Morrison Mfg. Co., Boston, Mass.  
Mundy, J. S., Hoisting Engine Co., Newark, N. J.  
National Hoisting Engine Co., Harrison, N. J.  
Union Elevator & Machine Co., Chicago, Ill.  
Vulcan Iron Works, Chicago, Ill.

**PILERS, BAG.**

Link-Belt Co., Chicago, Ill., and Philadelphia, Pa.

**PILERS OR STACKERS.**

(See "Elevators, Portable.")

**PINCHERS, BLACKSMITHS' AND CARPENTERS'.**

Buffum Tool Co., Louisiana, Mo.  
Gray Iron Foundry Co., Reading, Pa.  
Heller Bros Co., Newark, N. J.  
Larson—Milwaukee Tool & Forge Co., Milwaukee, Wis.  
Mechanics Tool Co., Rockford, Ill.  
Peck, Stow & Wilcox Co., Southington, Conn.  
S. & S.—Schuchardt & Schutte, New York, N. Y.  
S.—The H. D. Smith & Co., Plantsville, Conn.  
Schmitt, Wm., Co., Newark, N. J.

**PINCH DOGS, PATTERNMAKERS'.**

Johnson, Wm., Newark, N. J.

**PINS, AIR BRAKE AND KNUCKLE.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
Cambria Steel Co., Johnstown, Pa.  
Champion Rivet Co., Cleveland, O.  
Hubbard & Co., Pittsburgh, Pa.  
Illinois Bolt, Nut & Forging Co., Chicago, Ill.  
O'Leary, Arthur J., & Son, Co., Chicago, Ill.  
♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
Otis, Spencer Co., Chicago, Ill.  
Scranton Bolt & Nut Co., Scranton, Pa.  
Western Tool & Forge Co., Brackenridge, Pa.

**PINS, BENDING, PLUMBER'S.**

Bernz Co., Otto, Newark, N. J.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.  
National Tool Co., Brooklyn, N. Y.  
Vichek Tool Co., The, Cleveland, O.  
W. C. Carver Tool Works, Spring Valley, N. Y.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**PINS, COTTER.**

(See "Cotters and Keys.")

**PINS, DOWEL.**

Bowen Mfg. Co., Auburn, N. Y.  
Estes, E. B., & Sons, New York, N. Y.  
Obermayer S. Co., The, Cincinnati, Ohio.  
Winkley—Bowen Products Corp., Winkley Div., Detroit, Mich.

**PINS OR PLUGS, DRIFT, PLUMBERS'.**

Anderson Tool & Supply Co., Detroit, Mich.  
B. B.—B. B. Specialty Co., Pittsburgh, Pa.  
Bernz Co., Otto, Newark, N. J.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Horseshoe—The Stanley Rule and Level Plant, Atha Dept., New Britain, Conn.  
Johnson, Wm., Newark, N. J.  
Milwaukee Tool & Forge Co., Milwaukee, Wis.  
National Tool Co., New York, N. Y.  
Pittsburg Block & Mfg. Co., Pittsburgh, Pa.  
Sayre, L. A., Company, Newark, N. J.  
Verona Tool Wks., Pittsburgh, Pa.  
Woodward-Wanger Co., Philadelphia, Pa.

**PINS, PLUMBERS' TURN.**

B. B.—B. B. Specialty Co., Pittsburgh, Pa.  
Bernz Co., Otto, Newark, N. J.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Johnson, Wm., Newark, N. J.  
National Tool Co., Brooklyn, N. Y.  
Schmitt, Wm., Co., Newark, N. J.  
Woodward-Wanger Co., Philadelphia, Pa.

**PINS, TAPER.**

American Cotter Pin Co., Pittsburgh, Pa.  
Cassidy-Fairbanks Mfg. Co., Chicago, Ill.  
Chicago Nut Co., Chicago, Ill.  
Chicago Screw Co., The, Chicago, Ill.  
Detroit Screw Works, Detroit, Mich.  
H. M. S.—Hartford Machine Screw Co., Hartford, Conn.  
Justrite Mfg. Co., Chicago, Ill.  
Leard, Wm., Co., New Brighton, Pa.  
Morse Twist Drill & Machine Co., New Bedford, Mass.  
Pratt & Whitney Co., Hartford, Conn.  
Rochester Machine Screw Co., Rochester, N. Y.  
♦ Standard Tool Co., Cleveland, O.  
St. Louis Screw Co., St. Louis, Mo.  
The Wire Goods Co., Worcester, Mass.  
Western Automatic Machine Screw Co., The, Elyria, O.  
Worcester Machine Screw Co., Worcester, Mass.

**PIPE, ACID AND CHEMICAL.**

Duriron (acid proof)—The Duriron Co., Inc., Dayton, O.  
Wyckoff, A., & Son Co., Elmira, N. Y. (Wood stave.)



**PIPE, AIR BRAKE AND SIGNAL.**

Byers, A. M., Co., Pittsburgh, Pa.  
Cohoes Rolling Mill Co., Cohoes, N. Y.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE AMMONIA, REDRAWN OR LAP-WELDED.**

Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE FOR BENDING.**

American Foundry & Construction Co., Pittsburgh, Pa.  
Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE, BRASS.**

(See also "Tubing, Brass.")

American Brass Co., Ansonia, Conn.  
American Tube Works, Boston, Mass.  
Benedict & Burnham Co., Waterbury, Conn.  
Bridgeport Brass Co., New York, N. Y.  
Chase Rolling Mill, Waterbury, Conn.  
Coe Brass Mfg. Co., Torrington, Conn.  
Dallas Brass & Copper Co., Chicago, Ill.  
General Fire Extinguisher Co., Providence, R. I.  
Grinnell Company, Providence, R. I.  
Haydenville Co., The, Haydenville, Mass.  
Hungerford, U. T. Brass & Copper Co., New York  
New Jersey Tube Co., New York, N. Y.  
Randolph-Cloves Co., The, Waterbury, Conn.  
Rome Brass & Copper Co., Rome, N. Y.  
Simmons Pipe Bending Works, Newark, N. J.

**PIPE, BLOCK TIN.**

American Lead Co., Pittsburgh, Pa.  
Baker Lead Co., Worcester, Mass.  
Chadwick-Boston Lead Co., Boston, Mass.  
Consolidated Lead Co., New York, N. Y.  
Eagle-Picher Lead Co., Cincinnati, O.  
Follansbee Brothers Co., Pittsburgh, Pa.  
Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
Miller, Chas. & Sons Co., Utica, N. Y.  
National Lead Co., New York, N. Y.  
North American Smelting Co., Philadelphia, Pa.  
Raymond Lead Co., Chicago, Ill.  
Robertson Lead Co., James, Baltimore, Md.  
Rochester Lead Works, Rochester, N. Y.  
Selby Smelting & Lead Co., San Francisco, Cal.  
Union Smelting & Refining Co., Inc., Newark, N. J.  
United Lead Co., New York, N. Y.  
Wensley Metal Products Co., Denver, Colo.  
Windsor Mfg. Co., Milwaukee, Wis.

**PIPE, BRONZE.**

Boyts-Porter Co., Connellsville, Pa.

**PIPE & COUPLINGS, FIBRE.**

(See also Fibre, Hard.)

Bermico—Brown Company, Portland, Me.

**PIPE AND FITTINGS, CAST IRON, SOIL.**

AFCO—Anniston Foundry Co., Anniston, Ala.  
Agricola Pipe Co., Gadsden, Ala.  
Alabama—Alabama Pipe & Foundry Co., Anniston, Ala.  
American Enamel Mfg. Corp., Elizabeth, N. J.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Foundry & Pipe Co., Penn Station, Pa.  
Amiron—American Iron Products Co., Inc., New York, N. Y.  
Anniston Soil Pipe Co., Anniston, Ala.  
Beggs Pipe & Foundry Co., Birmingham, Ala.  
Chattanooga—The Casey-Hedges Co., Chattanooga, Tenn.  
Central Foundry Co., New York, N. Y.  
Central Sanitary Co., The, Bellefonte, Pa.  
Charlotte—Charlotte Pipe & Foundry Co., Charlotte, N. C.  
Chicago Foundry Co., Chicago, Ill.  
Chicago Pipe Co., Chicago, Ill.  
Chief Tuckahoe—Roberts Mfg. Co., Atlantic City, N. J.  
Cooper Foundry Co., The, Atchison, Kans.  
Coosa Pipe & Foundry Co., Gadsden, Ala.  
Crane Co., Chicago, Ill.  
Crown Pipe & Foundry Co., Jackson, O.  
Diamond—A. Weiskittel & Son, Baltimore, Md.  
Eastham Soil Pipe & Foundry Co., Anniston, Ala.  
East Penn Foundry Co., Macungie, Pa.  
Eichel & Co., Sales Agents, Richmond, Va., and Birmingham, Ala.  
Essex Foundry Co., Newark, N. J.  
Evans—Evans Clay Mfg. Co., Ulrichsville, O.  
Fleck Bros. Co., Philadelphia, Pa.  
Fuller Iron Works Co., The, Providence, R. I.  
F. & W.—Central Foundry Co., New York, N. Y.  
General Pipe & Foundry Co., Atlanta, Ga.  
Gadsden Pipe Co., Gadsden, Ala.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.

Hammond-Byrd Iron Co., Birmingham, Ala.  
Illinois Malleable Iron Co., Chicago, Ill.  
Independent Foundry Co., Lancaster, Pa.  
Johnson, J. D., Co., Philadelphia, Pa.  
Kelly & Jones Co., The, Greensburg, Pa.  
King & Andrews, Chicago Heights, Ill.  
Krupp Foundry Co. Ltd., Lansdale, Pa.  
McCambridge Co., Philadelphia, Pa.  
McVay & Walker, Braddock, Pa.  
McWane Pipe Co., The, Birmingham, Ala.  
Medina Iron & Brass Co., Medina, N. Y.  
M. F. Co.—Medina Foundry Co., Medina, N. Y.  
Miller & Son Co., Chas., Utica, N. Y.  
Mott Iron Works, The J. L., Trenton, N. J.  
National Foundry Co. of N. Y., Inc., Brooklyn, N. Y.  
National Pipe & Foundry Co., Attalla, Ala.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
O'Malley Mfg. Co., Scranton, Pa.  
Penn—East Penn Foundry Co., Macungie, Pa.  
Rabe Pipe & Foundry Co., Chattanooga, Tenn.  
Reading Scale & Machine Co., Reading, Pa.  
Renco—Walter P. Renker Co., Jersey City, N. Y. (fittings only).  
Rome Soil Pipe Mfg. Co., Rome, Ga. (Selling Agents, Eichel & Co., Richmond, Va.)  
Salem Brass & Iron Mfg. Co., Bridgeton, N. J.  
Sanitary Company of America, Linfield, Pa.  
Scranton Pump Co., Scranton, Pa.  
Somerville Iron Works, Somerville, N. J.  
South Pittsburgh Foundry Co., South Pittsburgh, Tenn.  
Southern Pipe & Foundry Co., The, Knoxville, Tenn.  
Standard Cast Iron Pipe & Foundry Co., Bristol, Pa.  
Standard Foundry Co., Anniston, Ala.  
Star Brand—Abendroth Brothers, Port Chester, N. Y.  
Superior Pipe Co., Birmingham, Ala.  
Union Foundry Co., Anniston, Ala.  
Union Sanitary Mfg. Co., Noblesville, Ind.  
Utica—Chas. Miller & Sons Co., Utica, N. Y.  
Wetter, H. Mfg. Co., Memphis, Tenn.  
Wood, R. D., & Co., Philadelphia, Pa.

**PIPE AND FITTINGS, CAST IRON, WATER AND GAS.**

American Cast Iron Pipe Co., Birmingham, Ala.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Steel & Tube Co., Lorain, O.  
Bassett-Presley Co., The, Cleveland, O.  
B & S—Lynchburg Foundry Co., Lynchburg, Va.  
Central Tube Co., Pittsburgh, Pa.  
Charlotte Pipe & Foundry Co., Charlotte, N. C.  
Clow & Sons, James B., Chicago, Ill.  
Crane Co., Chicago, Ill.  
Davis & Farnum Mfg. Co., Waltham, Mass.  
Dimmick Pipe Co., The, Birmingham, Ala.  
Donaldson Iron Co., Emaus, Pa.  
Drummond & Co., M. J., New York, N. Y.  
Fritz, Geo. J., Foundry & Machine Co., St. Louis, Mo.  
General Fire Extinguisher Co., New York, N. Y.  
General Pipe & Foundry Co., Atlanta, Ga.  
Glamorgan Pipe Foundry Co., Lynchburg, Va.  
Hammond-Byrd Iron Co., Birmingham, Ala.  
Kaltenthaler, H. J., Philadelphia  
La Belle Iron Works, Steubenville, O.  
Lynchburg Foundry Co., Lynchburg, Va.  
Miller & Son Co., Chas., Utica, N. Y.  
National Cast Iron Pipe Co., Birmingham, Ala.  
Pittsburgh Valve, Foundry & Construction Co., The, Pittsburgh, Pa.  
Ritter-Conley Mfg. Co., Pittsburgh, Pa.  
Schofield's Iron Works, Macon, Ga.  
Stacey—The Stacey Mfg. Co., Cincinnati, O.  
Standard Cast Iron Pipe & Foundry Co., Bristol, Pa.  
♦ Usitac—United States Cast Iron Pipe & Foundry Co., Burlington, N. J.  
Universal—Central Foundry Co., New York, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.  
Warren Foundry Machine Co., New York, N. Y.  
Wood & Co., R. D., Philadelphia, Pa.

**PIPE, COPPER.**

(See also "Tubing, Copper.")

American Tube Works, Boston, Mass.  
Ansonia Brass & Copper Co., Ansonia, Conn.  
Benedict & Burnham Co., Waterbury, Conn.  
Bridgeport Brass Co., New York, N. Y.  
New Jersey Tube Co., New York, N. Y.  
North American Copper Co., New York, N. Y.  
Rome Brass & Copper Co., Rome, N. Y.

**PIPE, COPPER BEARING STEEL.**

♦ Youngstown—The Youngstown Sheet & Tube Co., Youngstown, O.

**PIPE, CULVERT.**

(See "Pipe and Fittings, Sewer.")

**PIPE, CULVERT, METAL.**

Kelly Foundry & Machine Co., Goshen, Ind.  
Standard Spiral Pipe Works, Chicago, Ill.  
Texarkana Pipe Works, Texarkana, Tex.

**PIPE DIES AND CUTTERS.**

(See "Dies, Pipe Threading," and "Cutters, Pipe.")

**PIPE, DREDGE & LAND.**

American Rolling Mill Co., Middletown, O.  
Lancaster Iron Works, Inc., Lancaster, Pa.

**PIPE, DRILL.**

Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.  
Reading Iron Co., Reading, Pa.

**PIPE, DRIVE.**

Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.  
Reading Iron Co., Reading, Pa.

**PIPE, DRY KILN.**

Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.

**PIPES, EXHAUST AND BLOWER.**

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
Abendroth, G. Irving, Co., New York, N. Y.  
Dallas Brass & Copper Co., Chicago, Ill.  
Dixie Mfg. Co., Baltimore, Md.  
Kirk & Blum Mfg. Co., Cincinnati, Ohio.  
Koven, L. O., & Bro., Jersey City, N. J.  
Lancaster Iron Works, Inc., Lancaster, Pa.  
Littleford Bros., Cincinnati, O.  
Standard Spiral Pipe Works, Chicago, Ill.  
Taylor's—American Spiral Pipe Works, Chicago, Ill.

**PIPE, EXTRA HEAVY AND DOUBLE EXTRA HEAVY.**

Byers—Byers, A. M., Co., Pittsburgh, Pa.  
Cohoes Rolling Mill Co., Cohoes, N. Y.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE, FLANGE AND FLEXIBLE JOINT.**

◆ Usicast—United States Cast Iron Pipe & Foundry Co., Burlington, N. J.  
Wood, R. D., & Co., Philadelphia, Pa.

**PIPE, FLANGED, BENT AND STRAIGHT.**

(See also "Coils and Bends.")

Ballwood Co., The, Passaic, N. J.  
Cornell & Underhill, New York, N. Y.  
Crane Co., Chicago, Ill.  
Ford & Kendig Co., Philadelphia, Pa.  
Kellogg, M. W., & Co., New York, N. Y.  
Lumsden & Van Stone Co., Boston, Mass.  
Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
National Cast Iron Pipe Co., Birmingham, Ala.  
Pittsburgh Piping & Equipment Co., Pittsburgh, Pa.  
Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
Simmons Pipe Bending Co., Newark, N. J.  
Standard Spiral Pipe Works, Chicago, Ill.  
◆ Walmanco—Walworth Mfg. Co., Boston, Mass.  
Whitlock Coll Pipe Co., Hartford, Conn.

**PIPE FOR FLANGING.**

Byers, A. M. Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE, GALVANIZED.**

(See "Pipe, Steel," and "Pipe, Wrought Iron.")

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
American Spiral Pipe Works, Chicago, Ill.  
Berger Bros. Co., Philadelphia, Pa.  
Byers—A. M. Byers Co., Pittsburgh, Pa.  
Central Tube Co., Pittsburgh, Pa.  
Cohoes Rolling Mill Co., Cohoes, N. Y.  
Crane Co., Chicago, Ill.  
Cuyler & Mohler, Baltimore, Md.  
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
Liberty Iron Pipe & Nipple Works, New York.  
◆ Mark Mfg. Co., Chicago, Ill.  
National—National Tube Co., Pittsburgh, Pa.  
New York Blower Co., Chicago, Ill.  
◆ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, Ohio.

**PIPE, HAMMER-WELDED.**

National Tube Co., Pittsburgh, Pa.

**PIPE, HARD RUBBER.**

Diamond Rubber Co., The, Akron, O.

**PIPE, HYDRAULIC.**

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
American Welding Co., Carbondale, Pa.  
Ballwood—Ball & Wood Co., Elizabethport, N. J.  
Byers—A. M. Byers Co., Pittsburgh, Pa.  
Columbiana Boiler Co., Columbiana, Ohio.  
Ford & Kendig Co., Philadelphia, Pa.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Kellogg Co., M. W., New York, N. Y.  
Koven, L. O., & Bro., Jersey City, N. J.

Mark Mfg. Co., Chicago, Ill.  
National—National Tube Co., Pittsburgh, Pa.  
Philpps—American Pipe and Construction Co., Philadelphia, Pa.  
Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
Standard Spiral Pipe Works, Chicago, Ill.  
Watson-Stillman Co., New York, N. Y.  
◆ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, O.

**PIPE, KALMEINED, MATHESON, CONVERSE AND KIMBERLY JOINT.**

National—National Tube Co., Pittsburgh, Pa.

**PIPE, LEAD.**

American Lead Co., Pittsburgh, Pa.  
Bailey-Farrell Mfg. Co., Pittsburgh, Pa.  
Baker Lead Mfg. Co., Worcester, Mass.  
Blatchford—E. W. Blatchford & Co., Chicago, Ill.  
Charleston Lead Works, The, Charleston, S. C.  
Columbia Smelting & Refining Works, New York.  
Detroit Lead Pipe Co., Detroit, Mich.  
Du Bois, F. N., & Co., The, Inc., New York, N. Y.  
Eagle-Pitcher Lead Co., Cincinnati, O.  
Eagle Smelting & Refining Works, New York, N. Y.  
Essex Foundry Co., Newark, N. J.  
Fleck Bros. Co., Philadelphia, Pa.  
Gardner Metal Co., Chicago, Ill.  
Johnson, J. D., Co., Philadelphia, Pa.  
Lawrence Shot & Lead Co., Omaha, Neb.  
Liasberger & Son, Inc., Marks, Long Island City, N. Y.  
Miller & Son Co., Chas., Utica, N. Y.  
National Lead Co., New York, N. Y.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
North American Smelting Co., Philadelphia, Pa.  
Northwest Lead Co., Seattle, Wash.  
Omaha—Lawrence Shot & Lead Co., Omaha, Nebr.  
Phillips Lead & Supply Co., Providence, R. I.  
Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
Raymond Lead Works, Chicago, Ill.  
Robertson Lead Co., James, Baltimore, Md.  
Rochester Lead Works, Rochester, N. Y.  
Sandoval—Sandoval Zinc Co., Chicago, Ill.  
Tillinghast Supply Co., The, L. H., Providence, R. I.  
Union Smelting & Refining Co., Newark, N. J.  
United Lead Co., New York, N. Y.  
United Lead Co., St. Paul, Minn.  
Wensley Metal Products Co., Denver, Colo.  
Windsor Mfg. Co., Milwaukee, Wis.

**PIPE, LEAD LINED.**

Lead Lined Iron Pipe Co., Wakefield, Mass.  
United Lined Tube & Valve Co., Boston, Mass.

**PIPE, LEAD, TIN LINED.**

Consolidated Lead Co., New York, N. Y.  
◆ Hoyt Metal Co., St. Louis, Mo.  
Liasberger & Son, Inc., Marks, Long Island City, N. Y.  
Raymond Lead Co., Chicago, Ill.  
Rochester Lead Works, Rochester, N. Y.  
United Lead Co., New York, N. Y.

**PIPES, LOCOMOTIVE, DRY, ARCH AND BRIDGE.**

National—National Tube Co., Pittsburgh, Pa.

**PIPE, OIL AND GAS LINE.**

Byers—A. M. Byers Co., Pittsburgh, Pa.  
Central Tube Co., Pittsburgh, Pa.  
Hope Engineering & Supply Co., Pittsburgh, Pa.  
◆ La Belle Iron Works, Steubenville, O.  
Monongahela Tube Works, Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.  
Reliance Tube Co., Ltd., Pittsburgh, Pa.  
Wheeling Steel Corporation, Wheeling, W. Va.  
◆ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, O.

**PIPE, SEWER, CONCRETE.**

Lock Joint Pipe Co., New York, N. Y. (reinforced).

**PIPE, SIGNAL.**

Byers—A. M. Byers Co., Pittsburgh, Pa.  
National—National Tube Co., Pittsburgh, Pa.

**PIPE, SMOKE, CAST IRON FOR HEATING BOILERS AND FURNACES.**

Waterloo Register Co., Waterloo, Iowa.

**PIPE, SPIRAL, LOCK SEAM.**

Kansas City Spiral Pipe Co., The, Kansas City, Mo.  
Robertson Bros. Mfg. Co., Chicago, Ill.

**PIPE, SPIRAL, RIVETED.**

Kansas City Spiral Pipe Co., The, Kansas City, Mo.  
Petroleum Iron Works, Sharon, Pa.  
Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
Root—Abendroth & Root Mfg. Co., Newburgh, N. Y.  
Standard—Standard Spiral Pipe Works, Chicago, Ill.

Taylor's—American Spiral Pipe Works, Chicago, Ill.  
Western Gas Construction Co., Ft. Wayne, Ind.

#### PIPE STEEL, HAMMER-WELDED.

National Tube Co., Pittsburgh, Pa.

#### PIPE, STRAIGHT RIVETED.

Abendroth & Root Mfg. Co., Newburgh, N. Y.  
American Bridge Co. of New York, N. Y.  
American Pipe & Flange Co., New York, N. Y.  
Collins Iron Works, Phelps, N. Y.  
Columbiana Boiler Co., Columbiana, O.  
Davis & Farnum Mfg. Co., Waltham, Mass.  
Felber Engineering Works, New York, N. Y.  
Fits Water Wheel Co., Hanover, Pa.  
Gillespie Co., The T. A., New York, N. Y.  
Graver Tank Co., Wm., East Chicago, Ind.  
Hindley & Pendleton Co., Brooklyn, N. Y.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Koven & Bro., L. O., Jersey City, N. J.  
Lappan Mfg. Co., The James, Pittsburgh, Pa.  
Littleford Bros., Cincinnati, O.  
Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
McNeil & Bro. Co., James, Pittsburgh, Pa.  
Manistee Iron Works Co., Manistee, Mich.  
Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
New York Central Iron Works Co., Hagerstown, Pa.  
Petroleum Iron Work Co., Sharon, Pa.  
Phoenix Iron Works Co., Meadville, Pa.  
Ritter-Conly Co., Pittsburgh, Pa.  
Sacramento Pipe Works, Sacramento, Cal.  
Seafie, Wm. B., & Sons, Pittsburgh, Pa.  
Smith & Son Co., Samuel, Paterson, N. J.  
Struthers-Wells Co., Warren, Pa.  
Taylor's—American Spiral Pipe Works, Chicago, Ill.  
Treadwell Construction Co., Midland, Pa.  
Western Pipe & Steel Co., Los Angeles, Cal.

#### PIPE, SQUARE AND OBLONG.

Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Kirk & Blum Mfg. Co., Cincinnati, Ohio.  
Koven & Bro., L. O., New York, N. Y.

#### PIPE, STEEL COATED, DIPPED & ASPHALTED.

National—National Tube Co., Pittsburgh, Pa.

#### PIPE, STEEL, LOCK BAR.

East Jersey Pipe Co., New York, N. Y.  
Gillespie Co., The T. A., New York, N. Y.

#### PIPE, STEEL, WELDED.

Allegheny Steel Co., Brackenridge, Pa.  
Central Tube Co., Pittsburgh, Pa.  
Columbiana Boiler Co., Columbiana, Ohio.  
Cressman, W. O., Co., Philadelphia, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Keystone Tube Works, Connellsville, Pa.  
♦ LaBelle Iron Works, Steubenville, O.  
Monongahela Tube Co., Wilson, Pa.  
National—National Tube Co., Pittsburgh, Pa.  
New York Central Iron Works Co., Inc., Hagerstown, Md.  
Parkersburg Iron & Steel Co., Parkersburg, W. Va.  
Pittsburgh Tool Co., Monaca, Pa.  
Reading Iron Co., Reading, Pa.  
♦ Republic Iron & Steel Co., Youngstown, O.  
South Chester Tube Co., Chester, Pa.  
Spang-Chalfant & Co., Etna, Pa.  
Steel & Tube Co. of America, Chicago, Ill.  
Steere Engineering Co., Detroit, Mich.  
Tyler Tube & Pipe Co., The, Washington, Pa.  
Western Gas Construction Co., Ft. Wayne, Ind.  
Wheeling Steel Corporation, Wheeling, W. Va.  
Worth Bros. Co., Coatesville, Pa.  
♦ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, O.

#### PIPE AND FITTINGS, STEEL AND WROUGHT, FLANGED.

American Spiral Pipe Works, Chicago, Ill.  
Cornell & Underhill, New York, N. Y.  
Crane—Crane Co., Chicago, Ill.  
Essex Foundry, Newark, N. J.  
Fleck Bros. Co., Philadelphia, Pa.  
Kaltenthaler, H. J., Philadelphia.  
Kellogg, M. W., & Co., New York, N. Y.  
Kelly & Jones Co., The, Greensburg, Pa.  
Lynchburg Foundry Co., Lynchburg, Va.  
Mitchell, W. K., & Co., Philadelphia, Pa.  
National—National Tube Co., Pittsburgh, Pa.  
Pittsburgh Valve, Foundry & Construction Co., The, Pittsburgh, Pa.  
Simmons Co., John, New York, N. Y.  
South Chester Tube Co., Chester, Pa.  
South Park Foundry & Machine Co., St. Paul, Minn.  
U—Utica Pipe Foundry Co., Utica, N. Y.  
♦ Walworth Mfg. Co., Boston, Mass.  
Whitlock Coll Pipe Co., Hartford, Conn.  
Wood, R. D., & Co., Philadelphia, Pa.  
♦ Youngstown Sheet & Tube Co., The, Youngstown, O.

#### PIPE, THREADING AND CUTTING, TOOLS.

(See "Cutters, Pipe," and "Stocks, Die.")

♦ Armstrong Mfg. Co., Bridgeport, Conn.  
Beaver Easy Worker—Borden Co., Warren, O.  
♦ Greenfield Tap & Die Corp., Greenfield, Mass.  
Toledo Pipe Threading Machine Co., Toledo, O.  
♦ Walworth Mfg. Co., Boston, Mass.

#### PIPE, TUBES.

National—National Tube Co., Pittsburgh, Pa.

#### PIPE, WATER, WOOD STAVE.

American District Steam Co., N. Tonawanda, N. Y.  
Baltimore Cooperage Co., The, Baltimore, Md.  
Creosote—Pacific Coast Pipe Co., Seattle, Wash.  
Michigan—The Michigan Pipe Co., Bay City, Mich.  
Pacific Tank & Pipe Co., San Francisco, Cal.  
Remco—Redwood Manufacturers' Co., San Francisco, Calif.  
Standard Wood Pipe Co., Williamsport, Pa.  
Washington Pipe & Foundry Co., Tacoma, Wash.  
Wyckoff, A., & Son Co., Elmira, N. Y.  
Wyckoff Pipe & Creosoting Co., Inc., The, New York, N. Y.

#### PIPE, WROUGHT, COPPER LINED.

Materne Mfg. Co., St. Louis, Mo.

#### PIPE, WROUGHT IRON, WELDED.

American District Steam Co., North Tonawanda, N. Y.  
American Foundry & Construction Co., Pittsburgh, Pa.  
American Spiral Pipe Works, Chicago, Ill.  
Byers Genuine—A. M. Byers Co., Pittsburgh, Pa.  
Cohoes Rolling Mill Co., Cohoes, N. Y.  
Cressman, W. O., Co., Philadelphia, Pa.  
Du Bois, F. N., & Co., Inc., The, New York, N. Y.  
Delaware Steel Co., New York, N. Y.  
Empire Pipe Bending Corp., Brooklyn, N. Y.  
General Fire Extinguisher Co., Providence, R. I.  
Illinois Malleable Iron Co., Chicago, Ill.  
♦ La Belle Iron Works, Steubenville, O.  
Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
Oil Well Supply Co., Pittsburgh, Pa.  
Reading Iron Co., Reading, Pa.  
South Chester Tube Works, Chester, Pa.  
Spang, Chalfant & Co., Inc., Pittsburgh, Pa.  
♦ Youngstown—The Youngstown Sheet & Tube Co., Youngstown, O.

#### PIPES, ARCH.

National—National Tube Co., Pittsburgh, Pa.  
P. I. Co.—Parkersburg Iron Co., Parkersburg, Pa.  
Pittsburg Steel Products Co., Pittsburgh, Pa.

#### PIPES, BATH SUPPLY, ANNEALED.

Glauber Brass Mfg. Co., Cleveland, O.  
Haydenville Co., The, Haydenville, Mass.  
Mueller, H., Mfg. Co., Decatur, Ill.  
New Jersey Tube Co., New York, N. Y.  
Standard Brass Mfg. Co., Utica, N. Y.  
Street & Kent Mfg. Co., Chicago, Ill.  
Woodward-Wanger Co., Philadelphia, Pa.

#### PIPES, BATH, BASIN AND CLOSET SUPPLY AND WASTE.

Acheson Mfg. Co., Braddock, Pa.  
American Brass Mfg. Co., The, Cleveland, O.  
American Brass & Copper Co., The, New York, N. Y.  
Ampinop—American Fin Co., Waterbury, Conn.  
Beaton Mfg. Co., A. J., New Britain, Conn.  
Bridgeport Brass Co., Bridgeport, Conn.  
Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
Cochran, J. A. Brass Mfg. Co., Cleveland, Ohio.  
Dearborn Brass Co., Cedar Rapids, Ia.  
Diamond Mfg. Co., Detroit, Mich.  
Douglas Co., The John, Cincinnati, O.  
Dunstane Mfg. Co., Concord, N. H.  
Edwardsville Brass Works, Edwardsville, Ill.  
Elgin—Elgin Brass Co., Cleveland, O.  
Emery, Wm. S., New York, N. Y.  
Faultless—J. J. Ryan & Co., Chicago, Ill.  
Federal Brass Mfg. Co., Cleveland, O.  
Federal-Huber Co., Chicago, Ill.  
Frost Mfg. Co., The, Kenosha, Wis.  
Glauber Brass Mfg. Co., Cleveland, O.  
Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Haydenville Co., Haydenville, Mass.  
Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
Ireland & Matthews Mfg. Co., Detroit, Mich.  
Kent—F. C. Kent Co., Irvington, N. J.  
Little, M. S., Mfg. Co., The, Hartford, Conn.  
Loyal Brass Co., Cleveland, O.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Mott Iron Works, The J. L., Trenton, N. J.  
Mueller Mfg. Co., H., Decatur, Ill.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
New Jersey Tube Co., New York, N. Y.  
Northern Brass Mfg. Co., Waukegan, Ill.  
Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
Peck Bros. & Co., The, New Haven, Conn.

Powers Mfg. Co., J. P., Ossining, N. Y.  
 Reid Brass Mfg. Co., Brooklyn, N. Y.  
 Rockford Brass Works, Rockford, Ill.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Shwab Bros. Co., New York, N. Y. (galv.).  
 Standard Brass Mfg. Co., Utica, N. Y.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Union Metal Works, Chelsea, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Western Brass Co., Milwaukee, Wis.  
 Wise, J. B., Watertown, N. Y.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### PIPES, ROSE.

Allen Fire Department Supply Co., Providence, R. I.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Boston—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Buckley Rubber Co., J. W., New York, N. Y.  
 Callahan—The Cornelius Callahan Co., Boston, Mass.  
 Cary—The Cornelius Callahan Co., Boston, Mass.  
 ♦ C. L. E.—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Clay, John H., Philadelphia, Pa.  
 Cliff & Gulbert Co., New York, N. Y.  
 Dixon Valve & Coupling Co., Philadelphia, Pa. (Malleable).  
 Essex Foundry, Newark, N. J.  
 Farnam Brass Works, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Howell, F. R., Brass Works, Philadelphia, Pa.  
 Knox (malleable)—Knox Mfg. Co., Inc., Philadelphia, Pa.  
 La Favorite Rubber Mfg. Co., Paterson, N. J.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Schlangen Bros. Co., Chicago, Ill.  
 ♦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.  
 Seattle Brass Co., Seattle, Wash.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Underwriter's—S. F. Hayward & Co., New York.  
 Underwriter—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Woodhouse Mfg. Co., New York, N. Y.

#### PIPES, PERFORATED, AND FITTINGS, URINAL FLUSHING.

Acheson Mfg. Co., Braddock, Pa.  
 Grey & Krause Mfg. Co., Allentown, Pa.  
 Goetz—Goetz Brass Co., Chicago, Ill.

#### PIPING, BLOW, EXHAUST AND VENTILATING.

Abendroth & Stein, New York, N. Y.  
 Allington & Curtis Mfg. Co., Saginaw, Mich.  
 American Gas Furnace Co., New York, N. Y.  
 Buffalo Dental Mfg. Co., Buffalo, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Cyclone Blow Pipe Co., Chicago, Ill.  
 Decatur Cornice & Roofing Co., Decatur, Ill.  
 Dixie Mfg. Co., Baltimore, Md.  
 Hoskins Mfg. Co., Detroit, Mich.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Littleford Bros., Cincinnati, O.  
 National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.  
 New England Ventilating & Heating Co., Providence.  
 Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Skinner Bros. Mfg. Co., St. Louis, Mo.  
 Standard Spiral Pipe Works, Chicago, Ill.  
 Sterling Blower Co., The, Hartford, Conn.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York, N. Y.  
 U. S. Blow Pipe & Dust Collecting Co., Chicago, Ill.  
 Wald, Emil, Blow Pipe Works, Brooklyn, N. Y.

#### PIPING, HIGH PRESSURE, CON- TRACTORS FOR.

Almfrall & Company, Inc., New York, N. Y.  
 Grinnell Company, Providence, R. I.  
 Globe—Globe Automatic Sprinkler Co., Philadelphia, Pa.  
 Hopson & Chapin Mfg. Co., New London, Conn.  
 Johnson, C. W., Inc., Chicago, Ill.  
 Kroeschell Bros. Co., Chicago, Ill.  
 Parks-Cramer Co., Fitchburg, Mass.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Prentice Co., L. H., Chicago, Ill.  
 Shaw, Benjamin F., Co., Wilmington, Del.

#### PISTOLS, AIR.

Clafin—C. A. Clafin Co., Boston, Mass.

#### PITCH, ASPHALT, CAULKING.

Baltimore Oakum Co., Baltimore, Md.  
 Carey—The Philip Carey Mfg. Co., Cincinnati, O.  
 Genasco—Barber Asphalt Paving Co., Philadelphia, Pa.

#### PITCH, ROOFING.

Barber Asphalt Paving Co., Philadelphia, Pa.  
 Crescent—Warren Chemical Div., The Barrett Co., New York.  
 Hibralter—C. S. Garrett & Son Co., Philadelphia, Pa.  
 McClinton & Irvine Co., The, Pittsburgh, Pa.  
 Watson, H. F., Erie, Pa.

#### PLANERS, ANGLE.

Thomas Spacing Machine Co., Pittsburgh, Pa.

#### PLANERS, METAL WORKING.

American—The American Tool Works Co., Cincinnati, O.  
 Automatic Machine Co., Bridgeport, Conn.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Bickett Machine & Mfg. Co., Cincinnati, Ohio.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 Cincinnati—Cincinnati Planer Co., The, Cincinnati, Ohio.  
 Cincinnati Shaper Co., The, Cincinnati, O.  
 Cleveland—Cleveland Planer Co., The, Cleveland, O. (Open end.)  
 Conradson—Conradson Machine Tool Co., Green Bay, Wis.  
 Detrick & Harvey Machine Co., The, Baltimore, Md.  
 Fitchburg Machine Works, Fitchburg, Mass.  
 Flather Planer & Shaper Co., Nashua, N. H.  
 Fly Speed-Cut—Powell Machine Co., Fitchburg, Mass.  
 Garvin Machine Co., The, New York, N. Y.  
 Gleason Works, Rochester, N. Y.  
 Gorton, Geo., Machine Co., Racine, Wis.  
 Gray—G. A. Gray Co., Cincinnati, O.  
 Hamilton Machine Tool Co., Hamilton, O.  
 Harrington, Edwin, Son & Co., Philadelphia, Pa.  
 Hendey Machine Co., Torrington, Conn.  
 Hy-Speed-Cut—Powell Machine Co., Worcester, Mass.  
 Lee—Frank H. Lee Co., The, Danbury, Conn.  
 Liberty Quality Planer—The Liberty Machine Tool Co., Hamilton, O.  
 McCabe, J. J., Lathe & Mach'y Corp., New York, N. Y.  
 ♦ Manning, Maxwell & Moore, Inc., Fitchburg, Mass.  
 Morton Mfg. Co., Muskegon, Mich.  
 New Haven Mfg. Co., New Haven, Conn.  
 Newman—The Tanite Co., Stroudsburg, Pa. (emery).  
 Niles-Rement-Pond Co., New York, N. Y.  
 Ohio—The Ohio Machine Tool Co., Kenton, O.  
 Pratt & Whitney Co., Hartford, Conn.  
 Putnam—Manning, Maxwell & Moore, Inc., Fitchburg, Mass.  
 Rockford—Rockford Machine Tool Co., Rockford, Ill.  
 Schneider & Gossman Machine Co., The, Cincinnati, O.  
 Sellers & Co., Inc. Wm., Philadelphia, Pa.  
 Stirk Hiloplane—Alfred Herbert, Ltd., New York.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.  
 Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass.  
 Wilson—Morley Machinery Corp., Rochester, Pa.  
 Woodward & Powell Planer Co., Worcester, Mass.

#### PLANERS, PLATE.

Hilles & Jones Co., Wilmington, Del.  
 Ryerson, Joseph T., & Son, Chicago, Ill.

#### PLANERS, PORTABLE AND TRAVELING HEAD.

Morton Mfg. Co., Muskegon Heights, Mich.

#### PLANERS, WOODWORKING.

(See also "Machinery, Woodworking.")

American—American Saw Mill Machinery Co., Hackensack, N. J.  
 American Woodworking Mach'y Co., Rochester, N. Y.  
 Chase Turbine Co., Orange, Mass.  
 Cole Rotary Bed—Lebanon Machine Co., Lebanon, N. H.  
 ♦ Crescent—Crescent Machine Co., Leontonia, O.  
 De Loach Mill Mfg. Co., Chattanooga, Tenn.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Hermance Machine Co., Williamsport, Pa.  
 Hill-Curtis Co., Kalamazoo, Mich.  
 Humphrey Machine Co., Keene, N. H.  
 Lane Mfg. Co., Montpelier, Vt.  
 National Woodworking Machinery Co., Dover, N. H.  
 Newman Machine Co., Greenboro, N. C.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Robertson Mfg. Co., Buffalo, N. Y.  
 Sidney Machine Tool Co., The, Sidney, O.  
 ♦ Sinker Davis Co., Indianapolis, Ind.  
 Smith—H. B. Smith Machine Co., Smithville, N. J.  
 Towsley, John T., Mfg. Co., Cincinnati, Ohio.  
 Wallace Bench Planer—J. D. Wallace & Co., Chicago, Ill.  
 Whitney—Whitney, Baxter D., & Son, Winchendon, Mass.  
 Woods, S. A., Machine Co., Boston, Mass.  
 Yates, P. B., Machine Co., Beloit, Wis.

#### PLANES, DOVETAILING.

Reeves—The Reeves Hardware Mfg. Co., Chicago, Ill.

**PLANES, WOOD AND IRON.**

- ♦ Bailey & Red Rock—Stanley Rule & Level Co., New Britain, Conn.
- Buckeye Vise Co., Cleveland, O.
- Chapin-Stephens Co., Pine Meadow, Conn. (wood only).
- Clipper—Clipper Tool Co., Buffalo, N. Y.
- Mack Company, Rochester, N. Y.
- Sandusky Tool Co., Sandusky, O.
- Sargent—Sargent & Co., New Haven, Conn.
- Schmitt Co., Wm., Newark, N. J.
- Sulton, I. N., & Sons, Atlantic, Ia.
- Union Hardware Co., Torrington, Conn.
- Vaughan & Bushnell Mfg. Co., Chicago, Ill.

**PLANIMETERS.**

- ♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- Batchelder—John S. Bushnell & Co., Brooklyn, N. Y.
- Bristol's—Durand—Bristol Co., The, Waterbury, Conn.
- Bushnell—John S. Bushnell & Co., New York, N. Y.
- Coffin—The Ashcroft Mfg. Co., New York, N. Y.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Jost's Sons, Edmund, Newark, N. J.
- Keufel & Esser Co., New York, N. Y.
- Lippincott—A. C. Lippincott, East Orange, N. J.
- Pintch—Olds Gas Power Co., Lansing, Mich.
- R. T. & Co.—Richard Thompson & Co., New York.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Thompson—Richard Thompson & Co., New York, N. Y.
- Trill—Trill Indicator Co., Corry, Pa.
- Willis—James L. Robertson & Sons, New York, N. Y.

**PLANTS, ASPHALT PAVING.**

Warren Bros. Co., Boston, Mass.

**PLANTS, GALVANIZING.**

Erie Foundry Co., Erie, Pa.  
Meaker Galvanizing Co., The, Chicago, Ill.  
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O. (for wire).  
U. S. Electro Galvanizing Co., Brooklyn, N. Y.  
Wilfong Iron Works, Millard F., Philadelphia, Pa.

**PLANTS, GASOLINE MAKING.**

Hope Engineering & Supply Co., Pittsburgh, Pa.  
United—U. S. Cuban Allied Works, Engr. Corp., Bradford, Pa.

**PLANTS, GRAVEL WASHING AND SCREENING.**

Acme Road Machinery, Frankfort, N. Y.  
Link-Belt Company, Chicago and Philadelphia.  
Meese & Gottfried Co., San Francisco, Cal.

**PLANTS, RE-COOLING.**

General Condenser Co., Philadelphia, Pa.  
Koerting—Schutte & Koerting Co., Philadelphia, Pa.

**PLANTS, TAR DISTILLING.**

Koppers Co., The, Pittsburgh, Pa.

**PLATES, ANGLE, FOR BORING AND GRINDING MACHINES.**

Beckett—C. H. Tracey Co., Boston, Mass.  
Universal—Eaton Scale & Machine Co., Boston, Mass.  
Up-To-Date Tool Co., Boston, Mass.

**PLATES, BASE OR SOLE.**

(See also "Machinery, Power Transmission.")

- American Tool & Machine Co., Boston, Mass.
- Barry—Barry Co., Muscatine, Ia.
- ♦ Bond Foundry & Machine Co., Manheim, Pa.
- ♦ Dodge Mfg. Co., Mishawaka, Ind.
- Nordyke & Marmon Co., Indianapolis, Ind.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Sprout, Waldron & Co., Muncy, Pa.
- ♦ Valley Iron Works, Williamsport, Pa.
- ♦ Webster Mfg. Co., Chicago, Ill.
- ♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

**PLATES, BELT.**

(See also "Fasteners, Belt.")

- Crescent—Crescent Belt Fastener Co., Inc., New York, N. Y.
- ♦ Giant—Manufacturers Belt Hook Co., Chicago, Ill.
- Ideal—W. O. & M. W. Talcott, Providence, R. I.

**PLATES, BOILER ARCH.**

Sanitary Company of America, Linfield, Pa.

**PLATES, BRACE, TIE AND FOLLOWER.**

- ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.
- Hubbard & Co., Pittsburgh, Pa.
- Illinois Steel Co., Chicago, Ill.
- Inland Steel Co., Chicago, Ill.
- Pittsburgh Forge & Iron Co., Pittsburgh, Pa.

## THE BEATON & CORBIN MFG. CO.

SOUTHINGTON, CONN., Manufacturers of  
**FLOOR AND CEILING PLATES**

**Valves and Steam Specialties**

**BRANCH OFFICES:** J. W. Gannon, 30 Church St., New York, N. Y.; J. E. Willits, 1026 Stephen Girard Bldg., Philadelphia, Pa.; W. Erwin Gilchrist, 681 Market St., San Francisco, Calif.; W. H. Cunningham & Co., 133 Church St., Toronto, Canada; Edward H. Taylor, 209 Ideal Bldg., Denver, Colo.; Henry James North, Jr., P. O. Box 833, New Orleans, La.; Charles G. Bodley, 53 Davis Ave., Brookline, Mass.

**PLATES, CESSPOOL.**

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Fee & Mason Mfg. Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Jones Hollowware Co., Baltimore, Md.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Sanitary Company of America, Linfield, Pa.

**PLATES, COLUMN.**

Newbury, Jay H., & Son, Goshen, N. Y.

**PLATES, CONDENSER TUBE.**

Taunton-New Bedford Copper Co., Taunton, Mass.

**PLATES, CORE DRYING AND SNAP FLASK BOTTOM.**

Wadsworth Core Machine & Equipment Co., Akron, O.

**PLATES, DOOR, GLASS.**

Doerco—Doerr Glass Co., Vineland, N. J.

**PLATES, DOWEL.**

Johnson, Wm., Newark, N. J.

**PLATES, FIREBOX.**

Taunton-New Bedford Copper Co., Taunton, Mass.

**PLATES, FLOOR, BREAKABLE.**

Pittsburgh Valve & Fittings Co., Barberton, O.  
Ryerson, Joseph T., & Son, Chicago, Ill.

**PLATES, FLOOR AND CEILING.**

Ajax—W. A. Russell & Co., New York, N. Y.  
A. W.—Wood, Allan, Iron & Steel Co., Philadelphia, Pa.  
Barnes—Barnes Foundry Co., Jersey City, N. J.  
Beaton, A. J., Mfg. Co., New Britain, Conn.  
Beaton's Perfection—The Beaton & Cadwell Mfg. Co., New Britain, Conn.  
B. & C.—The Beaton & Corbin Mfg. Co., Southington, Conn.  
B. & C. No. 10 & No. 14—The Penn Engineering Co., Philadelphia, Pa.  
Budd Grate Co., Philadelphia, Pa.  
Carpenter & Paterson, Boston, Mass.  
Champion—Samuel Sloan & Co., Rochester, N. Y.  
Crane—Crane Co., Chicago, Ill.  
Devlin Mfg. Co., Thos., Philadelphia, Pa.  
Exeter Brass Works, Exeter, N. H.  
Farnan Brass Works, Cleveland, O.  
Fee & Mason Mfg. Co., New York, N. Y.  
Feralun, Bronzalun—American Abrasive Metal Co., New York, N. Y.  
Flexible—Flexible Metal Co., Bristol, Conn.  
Ford & Kendig Co., Philadelphia, Pa.  
Galva Heater Co., Galva, Ill.  
General Fire Extinguisher Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Good—Good Mfg. Co., Inc., New York, N. Y.  
Grabler "Sure Lock"—Grabler Mfg. Co., Cleveland, O.  
Grabler Universal—Grabler Mfg. Co., Cleveland, O.  
Hays Mfg. Co., Erie, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Imperial—W. A. Russell & Co., New York, N. Y.  
♦ Kelly & Jones Co., Greensburg, Pa.  
Lord—The C. H. Yonts Co., Meadville, Pa.  
Model—The Penn Engineering Co., Philadelphia, Pa.  
Modern Iron Works, Quincy, Ill.  
Modern Mfg. Co., Cleveland, Ohio.  
N. T. C.—National Tube Co., Pittsburgh, Pa.  
Newbury, Jay H., & Son, Goshen, N. Y.  
Newbury Mfg. Co., Monroe, N. Y.  
Norman, C. Erwin & Co., Chicago, Ill.  
O. K.—T. B. Cryer Co., Newark, N. J.  
Perfect—W. A. Russell & Co., New York, N. Y.  
Perkes Co., Charles, Philadelphia, Pa.  
Pittsburg Valve & Fittings Co., Barberton, O.  
Ravena Iron Co., Ravena, N. Y.  
Robinson Mfg. Co., The, Cleveland, O.  
Stearns, E. C., & Co., Syracuse, N. Y.  
Treadwell Engineering Co., New York, N. Y.  
Vosburg—N. O. Nelson Mfg. Co., St. Louis, Mo. (combined plate and sleeve).  
Vulcalun—American Abrasive Metal Co., New York.  
Warco—W. A. Russell & Co., New York, N. Y.

- ♦ Walworth Mfg. Co., Boston, Mass.
- Waterbury Mfg. Co., Waterbury, Conn.
- Wells—The Seaton & Corbin Mfg. Co., Southington, Conn.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

**PLATES, GUIDE.**

Hex—Detroit Hexagon Drill Co., Detroit, Mich.

**PLATES, LOCKNUT.**

Simmons—John Simmons Co., New York, N. Y.

**PLATES, MATCH (FOR FOUNDRIES).**

- ♦ St. Louis Machine Tool Co., St. Louis, Mo.

**PLATES, NAME, BRONZE.**

Essex Brass Corp., Detroit, Mich.  
Tyler, W. S. Co., Cleveland, O.

**PLATES, NAME, MACHINERY.**

Chandler Co., The, Springfield, Mass.  
Clark, H. W., Co., Mattoon, Ill.  
Everett, A. & Son, Auburn, N. Y.  
Glasgow Iron Works, Pottstown, Pa.  
Good—Good Mfg. Co., Inc., New York.  
Grammes, L. F. & Sons, Allentown, Pa.  
Hanson, C. H. Co., Chicago, Ill.  
Highton, Wm., & Sons Co., Nashua, N. H.  
Maddock's, Thos., Sons Co., Trenton, N. J.  
Matthews & Co., Jas. H., Pittsburgh, Pa.  
Moss, Henry & Co., Inc., New York, N. Y.  
Newman Mfg. Co., Cincinnati, O.  
Niagara Metal Stamping Corp., Niagara Falls, N. Y.  
Torrey Roller Bushing Co., Bath, Me.  
Turner Brass Works, The, Sycamore, Ill.

**PLATES, NAME, PLUMBERS.**

Art Brass Co., The, New York, N. Y.  
Bone China—The Trenton Potteries Co., Trenton, N. J.  
Good—Good Mfg. Co., New York, N. Y.  
Imperial Brass Mfg. Co., The, Chicago, Ill.  
National Gauge & Equipment Co., La Crosse, Wis.  
Newman Mfg. Co., Cincinnati, O.  
Peck Bros. & Co., The, New Haven, Conn.  
Perkes Co., Charles, Philadelphia, Pa.  
Union Metal Works, Chelsea, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**PLATES, PATTERN.**

Moltrup Steel Products Co., Beaver Falls, Pa.  
Moltrups—Allison & Co., Chester, Pa.

**PLATES, PIPE, EXPANSION AND SECTIONAL HOOK.**

Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Columbiana Boiler Co., Columbiana, Ohio.  
Essex Foundry, Newark, N. J.  
Modern Mfg. Co., Cleveland, O.  
Newbury Mfg. Co., Monroe, N. Y.  
Robinson Mfg. Co., The, Cleveland, O.

**PLATES, RAPPING, FOUNDRY.**

Buch Foundry Equipment Co., York, Pa.  
Colts T. & C.—Timmis & Clissold, Bound Brook, N. J.  
Diamond—Diamond Clamp & Flask Co., Richmond, Ind.  
Federal Malleable Co., West Allis, Wis.  
Perfect—The Dunker Supply Co., Canton, O.  
Shanafelt Mfg. Co., The, Canton, O.

**PLATES, RING, FOR PIPE.**

National Tube Co., Pittsburgh, Pa.  
Pittsburgh Valve & Fitting Co., Barborton, O.

**PLATES, SCREEN.**

Taunton-New Bedford Copper Co., Taunton, Mass.

**PLATES, SCREW.**

(See also "Dies.")

- Acme—American Tap & Die Co., Greenfield, Mass.
- Adamantine—American Tap & Die Co., Greenfield, Mass.
- ♦ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Carpenter Tap & Die Co., J. M., Pawtucket, R. I.
- Common Sense—W. L. Brubaker & Bros., Millersburg, Pa.
- ♦ Derby—Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Duplex—The Hart Mfg. Co., Cleveland, O.
- Eagle—American Tap & Die Co., Greenfield, Mass.
- ♦ Easy Electric—Champion Blower & Forge Co., Lancaster, Pa.
- Favorite, Improved, Paragon—Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.
- ♦ Green River—Greenfield Tap & Die Co., Greenfield, Mass.

Hercules—Greenfield Tap & Die Corp., Greenfield, Mass.

- Jarecki—Jarecki Mfg. Co., Erie, Pa.
- ♦ Lightning—Greenfield Tap & Die Co., Greenfield, Mass.
- ♦ Little Giant—Greenfield Tap & Die Co., Greenfield, Mass.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- ♦ O. K.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Polk & Son, A. J., Millersburg, Pa.
- ♦ Reece's Pat.—Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Reliable—Conant & Co., Conway, Mass.
- Russell Quality—Russell Mfg. Co., The, Greenfield, Mass.
- ♦ Smart—Greenfield Tap & Die Corp., Greenfield, Mass.
- Thistle—Winter Bros., Wrentham, Mass.
- ♦ Walworth Mfg. Co., Boston, Mass.

**PLATES, SOIL PIPE REPAIR.**

Fee & Mason Mfg. Co., New York, N. Y.  
Helland's (Phillips) Geo. W. Helland, New York, N. Y.

**PLATES, STEAM, HOLLOW.**

Crawford—Nashua Steam Press & Boiler Works, Nashua, N. H.

**PLATES, STEEL, SHEARED AND UNIVERSAL.**

Inland Steel Co., Chicago, Ill.  
Youngstown Sheet & Tube Co., Youngstown, O.

**PLATES, SURFACE CAST IRON.**

Bilton Machine Tool Co., The, Bridgeport, Conn.  
United—United Machine & Mfg. Co., Canton, Ohio.  
Up-To-Date Tool Co., Boston, Mass.

**PLATES, TERNE, ROOFING.**

(See "Roofing, Tin and Terne.")

**PLATES, WALL.**

- ♦ Kelly & Jones Co., The, Greensburg, Pa.
- National Tube Co., Pittsburgh, Pa.

**PLATFORMS, FOR LIFT TRUCKS.**

- Barrett-Cravens Co., Chicago, Ill.
- ♦ Hallowell—Standard Pressed Steel Co., Philadelphia, Pa.
- Lewis-Shepard Co., Boston, Mass.
- Littleford Bros., Cincinnati, O.

**PLATINUM, WIRE, SHEET, CONTACTS, ELECTRODES, ETC.**

Baker & Co., Newark, N. J.

**PLIERS, COMBINATION.**

- Alsteel—Boker Cutlery & Hdwe. Co., Inc., New York.
- Athol Machine Co., Athol, Mass.
- ♦ Auto Cle—Frank Mossberg Co., Attleboro, Mass.
- Auto Compressor Co., Wilmington, Del.
- B. B. No. 60—Bergman Tool Mfg. Co., Buffalo, N. Y.
- Bernard—The Wm. Schollhorn Co., New Haven, Conn.
- Bernz Co., Otto, Newark, N. J.
- Boker Cutlery & Hardware Co., Inc., New York.
- Buffum Tool Co., Louisiana, Mo.
- Bullock Mfg. Associates, Springfield, Mass.
- Caldwell—Caldwell Tool Mfg. Co., Inc., New York.
- Cee Tee Co.—Crescent Tool Co., Jamestown, N. Y.
- Crescent—Crescent Tool Co., Jamestown, N. Y.
- Crescent Motor Kit—Crescent Tool Co., Jamestown, N. Y.
- Crescent Universal—Crescent Tool Co., Jamestown, N. Y.
- Crescent Thin Bent Nose—Crescent Tool Co., Jamestown, N. Y.
- Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.
- Danielson, J. P. Co., Inc., Jamestown, N. Y.
- Enchased Joint—H. D. Smith & Co., Plantsville, Conn.
- Erie Tool Works, The, Erie, Pa.
- Flash Plirench—The Flash Sales Corp., Chicago, Ill.
- Gittattit—The H. D. Smith & Co., Plantsville, Conn.
- Gray Iron Foundry Co., Reading, Pa.
- Hargrave—The Cincinnati Tool Co., Cincinnati, O.
- ♦ Hayden—The Billings & Spencer Co., Hartford, Conn.
- Herbrand—The Herbrand Co., Fremont, O.
- Hjorth Bent Nose—Wm. Hjorth & Co., Jamestown.
- Irvington Mfg. Co., Irvington, N. J.
- Kilborne-Bishop Co., New Haven, Conn.
- Lakeside Forge Co., Erie, Pa.
- Lehigh—Bonney Forge & Tool Works, Allentown, Pa.
- Luther Grinder Mfg. Co., Milwaukee, Wis.
- McKaig's—McKaig Drop Forge Co., Buffalo, N. Y.
- McKaig-Hatch, Inc., Buffalo, N. Y.
- Motor Kit—Crescent Tool Co., Jamestown, N. Y.
- M. & M.—Maxson & Maxson Co., West Edmeston, N. Y.
- Osborne—C. S. Osborne & Co., Newark, N. J.
- Peck's Plier Wrench—West Haven Mfg. Co., New Haven, Conn.



Perfection—Clipper Tool Co., Buffalo, N. Y.  
 Schuchardt & Schutte, New York, N. Y.  
 Worcester Pressed Steel Co., Worcester, Mass.  
 ♦ Read—Read Mfg. Co., Erie, Pa.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
 Simplex—Crescent Tool Co., Jamestown, N. Y.  
 Tower & Lyon Co., New York, N. Y.  
 Utica Drop Forge Co., Utica, N. Y.  
 Victor—C. E. Bonner Mfg. Co., Champaign, Ill.  
 Victor, Dreadnought, Gripkut—Kraeuter & Co., Inc., Newark, N. J.  
 Vichek Tool Co., The, Cleveland, O.  
 Wright Wrench & Forging Co., Canton, O.

**PLIERS, EXPANSION.**

Bernz Co., Otto, Newark, N. J.  
 Schuchardt & Schutte, New York, N. Y.  
 Starrett—L. S. Starrett Co., Athol, Mass.

**PLIERS, GAS.**

Belfield & Co., H., Philadelphia, Pa.  
 Bernz Co., Otto, Newark, N. J.  
 Buffum Tool Co., Louisiana, Mo.  
 Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 Danielson, J. P. Co., Inc., Jamestown, N. Y.  
 Irvington Mfg. Co., Irvington, N. J.  
 ♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Red Devil—Smith & Hemenway Co., New York, N. Y.  
 Smith & Egge Mfg. Co., Bridgeport, Conn.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.

**PLIERS, LINEMEN'S, AND FENCING.**

Billings & Spencer Co., Hartford, Conn.  
 Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Irvington Mfg. Co., Irvington, N. J.  
 Klein—Mathias, Klein & Son, Chicago, Ill.  
 Kraeuter & Co., Inc., Newark, N. J.  
 Red Devil—Smith & Hemenway Co., New York, N. Y.  
 Sayre, L. A. Company, Newark, N. J.  
 Utica—Utica Drop Forge & Tool Co., Utica, N. Y.

**PLIERS, NUT.**

V. & B.—Vaughan & Bushnell Mfg. Co., Chicago, Ill.

**PLIERS, SIDE CUTTING.**

Neverslip—Neverslip Works, New Brunswick, N. J.

**PLOWS, GRADING AND RAILROAD.**

American—The American Steel Scraper Co., Sidney, Ohio.  
 Centerdraft—Olmstead, E. A. & Sons, Pulaski, N. Y.  
 Sidney—Sidney Steel Scraper Works, Sidney, O.

**PLUGS, BASIN AND BATH, BRASS.**

Acheson Mfg. Co., Braddock, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Fin Co., Waterbury, Conn.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
 Durham—Prier Brass Mfg. Co., Kansas City, Mo.  
 Elkhart Rubber Works, Elkhart, Ind.  
 Exeter Brass Works, Exeter, N. H.  
 Fries & Co., Buffalo, N. Y.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Goets Brass Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Heiland's—Geo. W. Heiland, New York.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Humphries Mfg. Co., The, Mansfield, O.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Murphy—Murphy's Specialty Co., Milwaukee, Wis.  
 Never-Lose—American Fin Co., Waterbury, Conn.  
 New Jersey Tube Co., New York, N. Y.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Penn—East Penn Foundry Co., Macungie, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Works, Ransom, W. Va.  
 Rex—Jenkins Mfg. Co., New York, N. Y.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Speakman Co., Wilmington, Del.  
 ♦ Sterling & Skinner Mfg. Co., Detroit, Mich.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Metal Works, Chelsea, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolff Mfg. Co., Chicago, Ill.

**PLUGS, BASIN, PATENT OVERFLOW.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Detroit Sanitary Sup. Co., Detroit, Mich.

Exeter Brass Works, Exeter, N. H.  
 Harrison—Codd Tank & Specialty Co., Baltimore, Md.  
 Haydenville Co., The, Haydenville, Mass.  
 Loyal Brass Co., Cleveland, O.  
 New Jersey Tube Co., New York, N. Y.  
 Perkes Co., Charles, Philadelphia, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Stebbins Mfg. Co., E., Springfield, Mass.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Metal Works, Chelsea, Mass.  
 Wise, J. B., Inc., Watertown, N. Y.

**PLUGS OR STOPPERS, BOILER FLUE.**

Boston Steam Specialty Co., Boston, Mass.  
 Ferret—Max Machine Co., Clinton, Mass.  
 Fleming—The Grisco Spencer Co., New York, N. Y.  
 Handy—Webb & Son, Elkhart, Philadelphia, Pa.  
 Hills—McCanna Co., Chicago, Ill.  
 J. M.—Johns-Manville, Inc., New York, N. Y.  
 Jones, Wm., Implement Works, Minneapolis, Minn.  
 Max—Max Machine Co., Clinton, Mass.  
 National-Acme Mfg. Co., Cleveland, O.  
 Pioneer Brass Works, Indianapolis, Ind.  
 South Park Machine & Supply Co., Port Huron, Mich.  
 Swift's—Donnegan & Swift, New York, N. Y.  
 Webb, Thomas A., Newark, N. J.

**PLUGS FOR BRASS PIPE.**

A-B Stove Co., Dept. S, Battle Creek, Mich.  
 Acheson Mfg. Co., Braddock, Pa.  
 ♦ A. I. Co.—American Injector Co., Detroit, Mich. (plugs fusible.)  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Durham—Prier Brass Mfg. Co., Kansas City, Mo.  
 Exeter Brass Works, Exeter, N. H.  
 Fries & Co., Buffalo, N. Y.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McEae & Roberts Co., The, Detroit, Mich.  
 Penn—East Penn Foundry Co., Macungie, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Powhatan Brass & Iron Works, Charles Town, W. Va.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Roberts Brass Mfg. Co., The, Detroit, Mich.  
 ♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 ♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

**PLUGS, BULL, OIL WELL.**

Norris, W. C., Tulsa, Okla.

**PLUGS, CAST IRON.**

Abendroth Bros., Port Chester, N. Y.  
 Advance—J. A. Zura Mfg. Co., Erie, Pa.  
 Allens—The Allen Mfg. Co., Hartford, Conn.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Andrews—R. C. McWane, New York, N. Y.  
 Belfield & Co., H., Philadelphia, Pa.  
 Clark Co., The, West Newton, Pa.  
 C.—Crane Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Exeter Brass Works, Exeter, N. H.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lambert & Co., Geo. B., Chicago, Ill.  
 Moore—John T. Moore & Bros., Terre Haute, Ind.  
 Newbury, Jay Herbert, Goshen, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Richmond Foundry & Mfg. Co., Richmond, Va.  
 Sanitary Company of America, Linfield, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**PLUGS, CLEANOUT, SOIL PIPE.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
 Craig's—David Craig, Boston, Mass. (dead end).  
 Dehn's Acme—Compound Injector & Specialty Co., Chicago, Ill.  
 Sanitary Company of America, Linfield, Pa.

**PLUGS, CONDENSER.**

Richardson Brass Co., Edro, Baltimore, Md.

**PLUGS, CORE HOLE.**

Welch—M. D. Hubbard Mfg. Co., Pontiac, Mich.

**PLUGS, COUNTERSUNK.**

Acheson Mfg. Co., Braddock, Pa.  
 C.—Crane Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Newbury, Jay Herbert, Goshen, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**PLUGS, FIRE.**

(See also "Hydrants, Fire.")

- American, Empire & National-American Foundry & Mfg. Co., St. Louis, Mo.  
 ♦ American-American Injector Co., Detroit, Mich.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Flower Valve Mfg. Co., Detroit, Mich.

**PLUGS, FUSIBLE.**

- Allen Mfg. Co., W. D., Chicago, Ill.  
 Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Bailey—Boston Steam Specialty Co., Boston, Mass.  
 Belknap Mfg. Co., The, Bridgeport, Conn.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Capitol Brass Works, Detroit, Mich.  
 Crane—Crane Co., Chicago, Ill.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Fries & Co., Buffalo, N. Y.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kinsey & Mahler Co., Peoria, Ill.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Mass. Standard—Boston Brass Co., Waltham, Mass.  
 Moak Machine & Tool Co., Port Chester, Mich.  
 Ohio—The Ohio Injector Co., Wadsworth, O.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Plouff—Boston Steam Specialty Co., Boston, Mass.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Richardson Brass Co., Edro, Baltimore, Md.  
 Robinson—Boston Steam Specialty Co., Boston, Mass.  
 Scully Steel & Iron Co., Chicago, Ill.  
 Seattle Brass Co., Seattle, Wash.  
 ♦ Sherman Mfg. Co., H. E., Battle Creek, Mich.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 U. S. Standard—Boston Brass Co., Waltham, Mass.  
 U. S. Standard—Tranter Mfg. Co., Pittsburgh, Pa.  
 Vanduzen Co., The E. W., Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**PLUGS, LARGE, FOR TESTING WATER MAINS.**

Climax—C. M. Kemp Mfg. Co., Baltimore, Md.

**PLUGS, LAUNDRY TRAY, BRASS.**

- Acheson Mfg. Co., Braddock, Pa.  
 Acme Brass Works, Cleveland, O.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., The, Waterbury, Conn.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Durst Mfg. Co., The, New York, N. Y.  
 Exeter Brass Works, Exeter, N. H.  
 Fries & Co., Buffalo, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 New Jersey Tube Co., New York, N. Y.  
 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Phillips—Garrison Brass & Machine Co., New York.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Trenton Brass & Machine Co., Trenton, N. J.  
 Union Metal Works, Chelsea, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

**PLUGS, LEAD, OIL WELL.**

Larkin Packer Co., Bartlesville, Okla.

**PLUGS, LIMIT, OIL WELL.**

Robinson Packer Co., Tulsa, Okla.

**PLUGS, MALLEABLE IRON.**

- Belfield Co., H., Philadelphia, Pa.  
 C.—Crane Co., Chicago, Ill.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**PLUGS, RADIATOR.**

- Flagg, Stanley G., & Co., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Newbury, Jay H., & Son, Goshen, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Pittsburgh Valve & Fitting Co., Barberton, Vt.

**PLUGS, RUBBER, SERVICE.**

Behringer, Edward A., New York, N. Y.

**PLUGS, SAND, PLUMBERS'.**

- Bernz Co., Otto, Newark, N. J.  
 Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Concord Mfg. Co., Dayton, O.  
 Duplex—August T. Plugh, Hoboken, N. J.

- Ellis—Modern Iron Works, Quincy, Ill.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Johnson, Wm., Newark, N. J.  
 National Tool Co., Brooklyn, N. Y.  
 Sexton—W. H. Hussey & Son, New York.  
 Wolff's—Wolff Mfg. Co., Chicago, Ill.  
 Woodward-Wanger Co., Philadelphia, Pa.

**PLUGS, SINK.**

- Acheson Mfg. Co., Braddock, Pa.  
 Beaton Mfg. Co., A. J., New Britain, Conn.  
 Exeter Brass Works, Exeter, N. H.  
 Frank Bros., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**PLUGS AND VALVES, SOIL PIPE TESTING.**

- B. B.—B. B. Specialty Co., Pittsburgh, Pa.  
 Bernz Co., Otto, Newark, N. J.  
 C. J. Boyd's—Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
 Climax—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Concord Mfg. Co., The, Dayton, O.  
 Cooper—G. W. Austin & Co., Boston, Mass.  
 Dad—D. A. Donovan, Auburn, N. J.  
 Desper, Henry A., Co., Worcester, Mass.  
 Du Bois—F. N. Du Bois & Co., New York.  
 Duplex—August F. Plugh, Hoboken, N. J.  
 Ellis—Modern Iron Works, Quincy, Ill.  
 Essex Foundry, Newark, N. J.  
 Johnson, Wm., Newark, N. J.  
 Simmons, John, Co., New York, N. Y.  
 Smith, A. P., Mfg. Co., East Orange, N. J.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.

**PLUGS, TAP, BOILER AND PIPE REPAIR.**

- Good—Good Mfg. Co., Inc., New York, N. Y.  
 Hightower—C. G. Hightower, Samoa, Humboldt Co., Cal.  
 Modern Mfg. Co., Cleveland, O.  
 Rapid—Wolverine Brass Works, Grand Rapids, Mich.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**PLUGS AND TIES, WALL, GALVANIZED.**

- Estes, E. B., & Sons, New York, N. Y.  
 Ratty, Morse—Prescott & Son, J. B., Webster, Mass.  
 Kees—F. D. Kees Mfg. Co., Beatrice, Neb.  
 Sykes Metal Lath & Roofing Co., Niles, O.

**PLUMB BOBS.**

- Bernz, Otto, Newark, N. J.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Bullock Mfg. Associates, Springfield, Mass.  
 Can't Roll Hexagon—Dikeman Mfg. Co., The, Norwalk, Conn.  
 ♦ Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Euclid Stone & Brick Co., Cleveland, O.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Gray Iron Foundry Co., Reading, Pa.  
 Hold Fast, Round Steel—Bergman Tool Mfg. Co., Buffalo, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Lawler's Economy—Lawler Regulator Co., New York.  
 Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Perfection—Clipper Tool Co., Buffalo, N. Y.  
 Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Sargent—Sargent & Co., New Haven, Conn.  
 Sawyer Tool Mfg. Co., Fitchburg, Mass. (lead).  
 Starrett Co., The L. S., Athol, Mass.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Welch, T. F., & Co., Boston, Mass.  
 ♦ West Haven Mfg. Co., New Haven, Conn.

**PLUMBAGO.**

- Asbury Graphite Mills, Asbury, N. J.  
 Dixon, Jos., Crucible Co., Jersey City, N. J.  
 East India—Hill & Griffith Co., Cincinnati, O.  
 Federal Foundry Supply Co., Cleveland, O.  
 Hills—John Hill Foundry Supply Co., Cincinnati, O.  
 Kelly, T. P., & Company, Inc., New York.  
 McCormick, J. S., Co., Pittsburgh, Pa.  
 ♦ Mexican—The United States Graphite Co., Saginaw, Mich.  
 Obermayer, S., Co., Cincinnati, O.  
 Stevens, Frederic R., Detroit, Mich.  
 Velvet Blacking—Smith Facing & Supply Co., Cleveland, O. (foundry).

**PLUMBERS' FRIENDS.**

(See "Cups, Plumbers' Force.")

Frank Bros., New York, N. Y.

**PLUMBERS' SPECIALTIES.**

- Frank Bros., New York, N. Y.  
 South Haven Foundry & Machine Co., South Haven, Mich.

**PLUMBERS.**

Gurley—W. & L. E. Gurley, Troy, N. Y.

**PLUNGERS, PUMP.**

Aldrich Pump Co., The, Allentown, Pa.  
 Berger Brothers Co., Philadelphia, Pa.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Black-Clawson Co., Hamilton, Ohio.  
 Detroit Sanitary—Park & McKay, Detroit, Mich.  
 Lodbell Car Wheel Co., Wilmington, Del.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.

**PLUNGERS, TANK.**

Taiz, Jacob & Sen, Philadelphia, Pa.

**POCKETS, COAL, RETAIL.**

♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Guarantee Construction Co., New York, N. Y.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Polk System—Polk-Genung-Polk Co., Fort Branch, Ind.  
 Specialty Engineering Co., Philadelphia, Pa.

**POCKETS, DRIP, FOR STEAM MAINS.**

Pittsburgh Valve & Fittings Co., Barberton, O.

**POINTERS, BOLT.**

Cook Co., Asa S., Hartford, Conn.  
 Kent Machine Co., Kent, O.  
 National Machinery Co., Tiffin, O.  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.  
 Webster & Perkes Tool Co., Springfield, O.

**POINTERS, SPOKE AND DOWEL.**

Buckeye Vise Co., Cleveland, O.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Stearns, E. C. & Co., Syracuse, N. Y.

**POINTERS, WIRE.**

Morgan Construction Co., Worcester, Mass.  
 Welch, T. F., & Co., Boston, Mass.

**POINTS OR STRAINERS, DRIVE WELL.**

Chief Tuckahoe—Roberts Mfg. Co., Atlantic City, N. J.  
 Cook, A. D., Lawrenceburg, Ind.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Myers, F. E., & Bro., Ashland, O.  
 Rex—Ross Supply Co., The, Greenville, O.  
 ♦ Walworth—Walworth Mfg. Co., Boston, Mass.

**POINTS, TRAMMEL.**

Stearns, E. C. & Co., Syracuse, N. Y.  
 Welch, T. F., & Co., Boston, Mass.

**POLES, BRIDGE WARNING.**

National—National Tube Co., Pittsburgh, Pa.

**POLES, DINKEY.**

Dicke Tool Co., Downers Grove, Ill.

**POLES, ELECTRIC LIGHT AND RAILWAY, IRON AND STEEL.**

Aermotor Co., Chicago, Ill.  
 Franklin Steel Co., Franklin, Pa.  
 National—National Tube Co., Pittsburgh, Pa.

**POLES, FLAG, TUBULAR STEEL.**

Carr—W. O. Willison, Chicago, Ill. (tilting).  
 Blaw—Blaw-Knox Co., Pittsburgh, Pa.  
 Ford & Kendix Co., Philadelphia, Pa.  
 Kretschmer Mfg. Co., Dubuque, Iowa.  
 Marshall, Wm., Steam Boiler Works, Dubuque, Iowa.  
 McCurdy, Bernard, Philadelphia, Pa.  
 National—National Tube Co., Pittsburgh, Pa.  
 Simmons—John Simmons Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**POLES, LATH TOOL.**

Conradson—Phoenix Mfg. Co., Eau Claire, Wis.

**POLISH, METAL.**

♦ Advance—A. W. Chesterton Co., Boston, Mass.  
 Army & Navy—Grady Mfg. Co., Long Island City, N. Y.  
 Bar Keepers' Friend—Geo. W. Hoffman Co., Indianapolis, Ind.  
 Baums—Baums Castorine Co., Rome, N. Y.  
 Beacon—Cincinnati Oil Works Co., Cincinnati, O.  
 Blue Ribbon—International Metal Polish Co., Indianapolis, Ind.  
 Burnishine—J. C. Paul & Co., Chicago, Ill.  
 Corliss—Corliss Supply & Mfg. Co., St. Louis, Mo.  
 Climax—E. Reed Burns & Sons, Inc., Brooklyn, N. Y.

Crandall's Perfecto—Crandall Packing Co., Palmyra, N. Y.

Cremo—Grady Mfg. Co., Long Island City, N. Y.  
 Dealers' Steam Packing Co., The, Palmyra, N. Y.  
 Electrified Mineral—Reith Polish Co., Chicago, Ill.  
 E. Z. Q., Radium—Bobrick Chemical Co., Los Angeles, Calif.

Fireman's Friend—A. O. Bettis Mfg. Co., Kansas City, Mo.

Flash—Flash Chemical Co., Cambridge, Mass. (liquid).  
 Glittershine—Grady Mfg. Co., Long Island, N. Y.  
 Gold Medal, Nickel—George William Hoffman Co., Indianapolis, Ind.

Graspat Mfg. Co., Chicago, Ill.  
 Great Western Oil Co., The, Cleveland, O.  
 H. & V. W.—Hanson & Van Winkle Co., Newark, N. J.  
 Harris Oil Co., A. W., Providence, R. I.  
 Imperial—Rath Manufacturing Co., Inc., Philadelphia, Pa.

Improved Process, Economy—Economy Lubricating Co., Boston, Mass.  
 Kemoshyne—Kemoshyne Products, Inc., New York, N. Y.

Keystone—Imperial Polish Co., Philadelphia, Pa.  
 Keystone—John M. Watts Sons, Philadelphia, Pa.  
 Lord Polish Co., F. T., Cambridge, Mass.

Marine—James W. Crane Co., Inc., Brooklyn, N. Y.  
 McKicker, W. B., Brooklyn, N. Y.  
 Morganorite—Morgan Mfg. Co., Inc., Newport, R. I.  
 Munning & Co., A. P., Matawan, N. J.  
 Newman Mfg. Co., Cincinnati, O.

Nunbetter—S. W. Davis Oil Co., Providence, R. I.  
 P. L. C.—Patterson Lubricating Co., Boston, Mass.  
 Red Cap—C. M. Kimball Co., Winthrop, Mass.

Red Cross, Silva—L. Cline Mfg. Co., Chicago, Ill.  
 Reznor—Reznor Mfg. Co., Mercer, Pa.  
 Rublite—Oleum Products Co., Scranton, Pa.

Ruby-Rub—Hinds & Coon, Boston, Mass.  
 Scourer—Grady Mfg. Co., Long Island City, N. Y.  
 Shinson—Rochester Chemical Co., Rochester, N. Y.

Skat, Skat Silver—The Skat Co., Hartford, Conn.  
 Solarine—Solarine Co., Chicago, Ill.  
 Sonneborn Sons, Inc., L., New York, N. Y.

Star—The Bell Mfg. Co., St. Louis, Mo.  
 Star—Star Mfg. Co., Stamford, Conn.  
 Superba—Curry Bros. Oil Co., Boston, Mass.

U. S.—Geo. W. Hoffman, Indianapolis, Ind.  
 Whiz—R. M. Hollingshead Co., Camden, N. J.  
 World Refining Co., The, Easton, Pa.

Zibell, J. A., Co., New York, N. Y.  
 Zircon—Day Mfg. Co., The, S. A., Buffalo, N. Y.  
 Zone—S. W. Davis Oil Co., Providence, R. I.

**PONDS, COOLING, EQUIPMENT FOR.**

Badger & Sons Co., E. B., Boston, Mass.  
 Spray Engineering Co., Boston, Mass.  
 Yarway—Yarnall-Warning Co., Philadelphia, Pa.

**POSTS, BUMPING, RAILWAY.**

Buda—Buda Co., Chicago, Ill.

**POSTS, DRILLING, OR "OLD MEN."**

American Steel & Wire Co., Chicago, Ill.  
 ♦ Armstrong Bros. Tool Co., Chicago, Ill.  
 ♦ Keystone—The Keystone Mfg. Co., Buffalo, N. Y.  
 King—A. R. Mfg. Co., Kingston, N. Y.  
 ♦ Lovejoy—Lovejoy Tool Works, Chicago, Ill.  
 Luther Grinder Mfg. Co., Milwaukee, Wis.  
 ♦ Lutz—Lutz Co., Inc., Philadelphia, Pa.

**POSTS, INDICATOR, VALVE.**

Bourbon—The Bourbon Copper & Brass Works, Cincinnati, O.  
 Crane—Crane Co., Chicago, Ill.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Ludlow Valve Mfg. Co., Troy, N. Y.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ National—American Foundry & Mfg. Co., St. Louis, Mo.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 Pratt & Cady Co., Hartford, Conn.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y.  
 Smith, A. P. Mfg. Co., East Orange, N. J.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wood & Co., R. D., Philadelphia, Pa.

**POSTS, LAMP, STREET.**

Albree, Chester B., Iron Works Co., Pittsburgh, Pa.  
 Best—Best Light Co., Canton, O.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Clow, James B., & Sons, Chicago, Ill.  
 Drummond & Co., M. J., New York, N. Y.  
 Foran Foundry & Mfg. Co., Flemington, N. J.  
 General Gas Light Co., Kalamazoo, Mich.  
 Practical Gas Engine & Machine Wks., North Chicago, Ill.

**POSTS, TOOL, LATH TURRET.**

♦ Armstrong Bros. Tool Co., Chicago, Ill.  
 Chapin-Skelton Corp., Syracuse, N. Y.

- ♦ F-P-M—The McCrosky Tool Corp., Meadville, Pa.  
 Lovejoy Tool Co., Inc., Springfield, Vt.  
 O. K. Tool Co., Inc., Shelton, Conn.  
 Phoenix—Phoenix Mfg. Co., Eau Claire, Wis.  
 Rex—Rex Mfg. Co., Boston, Mass.  
 Universal—Magna Machine Co., Brooklyn, N. Y.

#### POSTS, TOWEL BAR, NICKEL AND WHITE.

- Doerco—Doerr Glass Co., Vineland, N. J.  
 Russell, John M., Mfg. Co., Inc., The, Naugatuck, Conn.

#### POSTS, VISE, PORTABLE.

- Penn—Penn Engineering Co., Reading, Pa.

#### POTENTIOMETERS.

- The Brown Instrument Co., Philadelphia, Pa.

#### POTS, CAUSTIC.

- Columbiana Boiler Co., The, Columbiana, Ohio.  
 Farrar & Trefts, Inc., Buffalo, N. Y.  
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.

#### POTS, GALVANIZING.

- Columbiana Boiler Co., The, Columbiana, Ohio.  
 Knox—Blaw-Knox Co., Pittsburgh, Pa.

#### POTS, GLUE.

- (See "Heaters, Glue.")

#### POTS, MARKING.

- Bradley, A. J., Mfg. Co., New York, N. Y.

#### POTS, METAL MELTING.

- American Scale Co., Kansas City, Mo.  
 Columbiana Boiler Co., The, Columbiana, Ohio.  
 Eclipse Fuel Engineering Co., Rockford, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 ♦ Valley Iron Works, Williamsport, Pa.

#### POTS, MELTING, PLUMBERS'.

- American Foundry & Mfg. Co., St. Louis, Mo.  
 American Saw & Tool Works, Chicago, Ill.  
 B B Specialty Co., Pittsburgh, Pa.  
 Bernz, Otto, Newark, N. J.  
 Best—Best Light Co., Canton, O.  
 Bignall Co., Medina, N. Y.  
 Casey-Hedges Co., Chattanooga, Tenn.  
 Central Foundry Co., New York, N. Y.  
 Clark-Cadle-Harmon Corp., Rochester, N. Y.  
 Detroit Torch & Mfg. Co., Detroit, Mich.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.  
 Focht, Geo., Sons, Hoboken, N. J.  
 Garrison Brass & Machine Works, New York.  
 General Electric Co., Schenectady, N. Y.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 ♦ Hollands Mfg. Co., Erie, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Modern Iron Works, Quincy, Ill.  
 Pollard, Joseph G., Brooklyn, N. Y.  
 Reading Foundry & Supply Co., Reading, Pa.  
 Red-Hot—Ashton Mfg. Co., Newark, N. J.  
 Richmond Foundry & Mfg. Co., Richmond, Va.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Sayre, L. A., Company, Newark, N. J.  
 Simplex Electric Heating Co., Cambridge, Mass.  
 Swett Iron Works, A. L., Medina, N. Y.  
 U. S. Cast Iron Pipe & Foundry Co., New York, N. Y.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Zurn, J. A., Mfg. Co., Erie, Pa.

#### POTS, TALLOW.

- Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
 ♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Trethaway Bros., Parsons, Pa.  
 Walters Mfg. Co., Pittsburgh, Pa.

#### POTS, TEMPERING AND HARDENING.

- Duquesne Steel Foundry Co., Pittsburgh, Pa.  
 Eclipse Fuel & Engineering Co., Rockford, Ill.  
 Garwood Bronze & Iron Works, Garwood, N. J.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Shelby—National Tube Co., Pittsburgh, Pa.

#### POWDER, SPORTING, MILITARY, BLASTING, ETC.

- American Powder Mills, Boston, Mass.  
 ♦ Atlas Powder Co., Wilmington, Del. Trade names—  
 Atlas, Giant, Forcite, Rendite, Miners Friend,  
 Coalite, Vigorite, Farm Powder, Quarry Powder,  
 Stump Powder.

## GILBERT'S SELF-PACKING GAUGE GLASS PRESERVER



A gasket for packing your gauge glass in boiler.

**ONCE TRIED. ALWAYS USED**

Small in size, mighty in power. Won't explode for a 250-lb. pressure. A trial will convince the most skeptical.

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**R. F. MORSE COMPANY**  
 Sole Owner and Manufacturer. Providence, R. I.

- Austin Powder Co., Cleveland, O.  
 ♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.  
 Trade Names—Ballistite, Dupont, Dupont Gallery, Dupont No. 1, Empire, Golden Pheasant, Hazard, Indian, Judson, Kentucky Rifle, Lesmoke, Marksmen, R. S. Q., Schuetzen Schultze, Indian Rifle, Red Cross.  
 Equitable Powder Mfg. Co., East Alton, Ill.  
 Grasselli—Grasselli Powder Co., Cleveland, O.  
 Great Western Powder Co., Toledo, O.  
 Hercules Powder Co., Wilmington, Del. Trade Names—  
 Red H. Xpdite Permissible Dynamite, Infallible Smokeless Shotgun Powder, E. C. Smokeless Shotgun Powder, L. & R. Orange Extra Black Sporting Powder, H. Vel. 300 & 308 Military Rifle Powders, Lightning Smokeless Rifle Powder, Sharpshooter Smokeless Rifle Powder, Unique Smokeless Rifle Powder, Bullseye Smokeless Revolver Powder, Hercomite, Special No. 1.  
 Keystone—Keystone National Powder Co., Emporium, Pa.  
 Miami Powder Co., Chicago, Ill.  
 United States Powder Co., Terre Haute, Ind.

#### POWERS, FOOT.

- American Grinder Mfg. Co., Milwaukee, Wis.  
 Goodell-Pratt Co., Greenfield, Mass.

#### POWERS, HORSE.

- Appleton Mfg. Co., Batavia, Ill.  
 ♦ Deming Co., Salem, O.  
 Whitman Agricultural Co., St. Louis, Mo.

#### POWERS, PUMPING.

- Masseth—Masseth Packer & Machine Works, Butler, Pa.  
 McEwen Mfg. Company, Tulsa, Okla.  
 Oklahoma Iron Works, Tulsa, Okla.  
 Reid Gas Engine Co., Joseph, Oil City, Pa.

#### PREHEATERS, WELDING.

- Aeroli Burner Co., Union Hill, N. J.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Hauck Mfg. Co., Brooklyn, N. Y.  
 Mahr—Mahr Mfg. Co., Minneapolis, Minn.  
 Wiederwax—Geist Mfg. Co., Atlantic City, N. J.

#### PRESERVATIVE, WOOD.

- Atlas—Atlas Preventive Co., of America, New York, N. Y.  
 Carpolene—Du Pont Chemical Works, New York, N. Y.  
 Preservaline—National Products Co., East Liverpool, Ohio.  
 Truscon—The Truscon Laboratories, Detroit, Mich.

#### PRESERVERS, LIFE.

- Armstrong Cork Co., Pittsburgh, Pa.

#### PRESERVERS, PROTECTORS AND SHIELDS, GAGE AND LUBRICATOR GLASS.

(See also "Washers, Gage Glass.")

- ♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Carberry—Handian-Buck Mfg. Co., St. Louis, Mo.  
 Fleur de Lis—Boston Steam Specialty Co., Boston, Mass.  
 Gilbert's—R. F. Morse Co., Providence, R. I.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 P. B. H.—Huyette, The Paul B., Co., Philadelphia.  
 Safety First—John F. Robertson Co., Pittsburgh, Pa.

#### PRESSES, ARBOR.

- American Pneumatic Chuck Co., Chicago, Ill.  
 Atlas Press Co., Kalamazoo, Mich.  
 Barnes, W. F., & John Co., Rockford, Ill.

Crane Puller Co., Arlington, Mass.  
Elmes, Charles F., Engineering Works, Chicago, Ill.  
Fleur de Lis—Boston Steam Specialty Co., Boston, Mass.

Fox Machine Co., Grand Rapids, Mich.  
Geler, P. A., Co., Cleveland, O.  
Greenerd—Edwin E. Bartlett, Nashua, N. H.  
Hannifin Mfg. Co., Chicago, Ill.  
Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
King Machine Tool Co., The, Cincinnati, O. (Hand and power.)

Lourie Mfg. Co., Springfield, Ill.  
Lucas Patent—Lucas Machine Tool Co., Cleveland, O.  
Manly—United Engine & Mfg. Co., Hanover, Pa.  
M. E. C.—Manufacturers' Equipment Co., Chicago, Ill.

Myers—Myers Machine Tool Corp., Philadelphia, Pa.  
Naperville Machine Co., Inc., Naperville, Ill.  
Nicholson—W. H. Nicholson & Co., Wilkesbarre, Pa.  
Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

Velco—Velco Mfg. Co., Inc., The, Greenfield, Mass.  
Watson-Stillman Co., New York, N. Y.  
Weaver Forcing—Weaver Mfg. Co., Springfield, Ill.

#### PRESSES, AXLE BOX.

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

#### PRESSES, BALING.

(See also "Presses, Hydraulic.")

Adams, W. T., Machine Co., Corinth, Mass.  
Alsteel—Alsteel Mfg. Co., Battle Creek, Mich.  
American—American Engine & Boiler Works, Tonawanda, N. Y.

Antigo—Mayer Bros., Antigo, Wis.  
Business Men's Paper Press Co., Wayland, Mich.  
Champion, Famous—Famous Mfg. Co., East Chicago, Ind.

Chicago Baling Press Co., Chicago, Ill. (for paper and scrap metal).

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Easay—Clifton-Pratt Co., Cincinnati, Ohio.  
Economy, Little Mint, Modern—Economy Baler Co., Ann Arbor, Mich.

Elmes, Charles F., Engineering Works, Chicago, Ill.  
Ertel—George Ertel Co., Quincy, Ill.

Fitts, Frank E., Mfg. & Sup. Co., Boston, Mass.  
Galland-Henning Mfg. Co., Milwaukee, Wis.  
Garrett, Samuel H., Philadelphia, Pa. (metal scrap).

Grammes, L. F. & Sons, Allentown, Pa.  
Handy—Grand Rapids Salvage Co., Grand Rapids, Mich.

Handy Sack Baler—T. G. White, Cedar Rapids, Iowa.  
Home—Home Mfg. Co., Mattoon, Ill.

Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
Kline, Lewis T., Alpena, Mich.

Logeman Bros. Co., Milwaukee, Wis.  
Marlen—Lenmar Mfg. Co., Saginaw, Mich.

Merchants Baler—Shaw, Welsh & Co., Galesburg, Ill.  
Minnich's—Minnich Machine Works, Landisville, Pa.

Modern Equipment Co., Lockport, N. Y. (paper).  
Modern Leader—Chicago Baling Press Mfg. Co., Chicago, Ill. (Scrap metal and paper).

Money-Maker—Swayne, Robinson & Co., Richmond, Ind.

Money Saver—Woodall Mfg. Co., Davenport, Ia.  
Port Huron Engine & Thresher Co., Port Huron, Mich.

Poston Baler Co., Chillicothe, Ohio.  
Republic Steel Package Co., Cleveland, Ohio. (Cement bag.)

Rowe Tip Top—Rowe Mfg. Co., Galesburg, Ill.  
Safety First—Chicago Baling Press Mfg. Co., Chicago, Ill.

Schick's—The Davenport Mfg. Co., Inc., Davenport, Ia.

Staley—Lourie Mfg. Co., Springfield, Ill.  
Superior—G. Wenzelmann, Galesburg, Ill. (paper).

Thelen—Thelen Brothers, Syracuse, N. Y.  
Vaughn—Vaughn Machinery Co., Cuyahoga Falls, O. (wire rod scrap.)

Watson-Stillman Co., New York, N. Y.  
Whitman Agricultural Co., St. Louis, Mo.

#### PRESSES, BLANKING.

Konigslow Stamping & Tool Works, E. Cleveland, O.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Toledo Machine & Tool Co., Toledo, Ohio.

#### PRESSES, BOTTLE CAP.

McDonald Machine Co., Chicago, Ill.

#### PRESSES, BUSHING.

Chambersburg Engineering Co., Chambersburg, Pa.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

#### PRESSES, BUTTON.

Helwig—Helwig Mfg. Co., St. Paul, Minn.

#### PRESSES, CEMENT LINING.

Union Water Meter Co., Worcester, Mass.

#### PRESSES, COINING.

Toledo Machine & Tool Co., The, Toledo, Ohio.

#### PRESSES, CRANK PIN.

Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
Watson-Stillman Co., The, New York.

#### PRESSES, DIE, SINKING.

Elmes, Charles F., Engineering Works, Chicago, Ill.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

#### PRESSES, DRAWING AND DOUBLE DRAWING.

Bliss, E. W. Co., Brooklyn, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.

#### PRESSES, DRILL.

(See "Machines, Drilling.")

#### PRESSES, DROP.

Bliss, E. W. Co., Brooklyn, N. Y.  
Canton Foundry & Machine Co., Canton, O.  
Consolidated Press & Tool Co., Hastings, Mich.  
Ferracute Machine Co., Bridgeton, N. J.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.

Leffer, Chas., & Co., Brooklyn, N. Y.  
Merriman—Meriden Press & Drop Co., The, Meriden, Conn.

Niagara Machine & Tool Co., Buffalo, N. Y.  
Ohl, Geo. A. & Co., Newark, N. J.

Peck—Miner & Peck Mfg. Co., New Haven, Conn.  
Toledo Machine & Tool Co., The, Toledo, Ohio.

Waterbury-Farrel Foundry & Machine Co., The, Waterbury, Conn.

Zeh & Hahnemann Co., Newark, N. J.

#### PRESSES, EMBOSING.

Baird Machine Co., Bridgeport, Conn.  
Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
Carver, C. R. Co., Philadelphia, Pa.  
Ferracute Machine Co., Bridgeport, N. J.  
Grammes, L. F. & Sons, Allentown, Pa.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.

Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
Lentz Art Die & Machine Co., Indianapolis, Ind. (for wood).

Logeman Bros., Milwaukee, Wis.  
Niagara Machine & Tool Works, Buffalo, N. Y.

Ohl—Geo. A. Ohl & Co., Newark, N. J.  
Oliver Machinery Co., Grand Rapids, Mich.

Perkins—Perkins Machine Co., Warren, Mass.  
Rockford Iron Works, Rockford, Ill.

Roovers—Roovers Bros., Brooklyn, N. Y.  
Waterbury-Farrell Foundry & Machine Co., The, Waterbury, Conn.

Zeh & Hahnemann Co., Newark, N. J.

#### PRESSES, FERTILIZER.

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Elmes, Charles F., Engineering Works, Chicago, Ill.  
Galland-Henning Mfg. Co., Milwaukee, Wis.

#### PRESSES, FILTER.

Beach, Russ Co., New York, N. Y.  
Canton-Hughes Pump Co., Wooster, O.

Johnson—Johnson, John, Co., Brooklyn, N. Y.  
Kelly—Emil E. Lungwitz, New York, N. Y.

Loew Mfg. Co., Cleveland, O.  
Logeman Bros. Co., Milwaukee, Wis.

Merrill's—Meese & Gottfried Co., San Francisco, Cal. (Mining.)

Perrin & Co., Wm. R., Chicago, Ill.  
Provo—Provost Engineering Corp., Brooklyn, N. Y.

Shriver—Shriver & Co., T. Harrison, N. J.  
Simplex—Simplex Ejector Co., Chicago, Ill.

Smith-Valve—Platt Iron Works, Dayton, Ohio.  
Sperry, D. R. & Co., Batavia, Ill.

#### PRESSES, FOOT AND HAND POWER.

Advance Machine Works, Brooklyn, N. Y.  
Atlas—Atlas Machine Co., The, Waterbury, Conn.

Atlas Press Co., Kalamazoo, Mich.  
Baird Machine Co., The, Bridgeport, Conn.

Bliss, E. C., Mfg. Co., Providence, R. I.  
Blake & Johnson Co., Waterbury, Conn.

Bliss Co., E. W., Brooklyn, N. Y.  
Ferracute Machine Co., Bridgeton, N. J.

Grammes, L. F. & Sons, Allentown, Pa.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.

Lebanon Machine Co., Lebanon, N. H.  
Lewthwaite, George A. Co., New York, N. Y.

Partridge—E. O. Partridge, Chicago, Ill.  
Peck, Stow & Wilcox Co., Southington, Conn.

Perkins—Perkins Machine Co., Warren, Mass.  
Roversford Foundry & Machine Co., Philadelphia, Pa.

Shuster, F. B., Co., New Haven, Conn.

Standard Machinery Co., Providence, R. I.  
 Taylor & Fenn Co., Hartford, Conn.  
 Toledo Machine & Tool Co., The, Toledo, Ohio.  
 V & O—The V & O Press Co., Brooklyn, N. Y. (horn-  
 ing and wiring, dial feed, roll feed, straight sided).  
 Waterbury-Farrel—The Waterbury Farrel Foundry &  
 Machine Co., Waterbury, Conn.  
 Weaver Forcing—Weaver Mfg. Co., Springfield, Ill.

#### PRESSES, FORGING.

Barnes, W. F. & John, Co., Rockford, Ill.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Elmes, Chas., Engine Works, Chicago, Ill.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Lucas Patent—Lucas Machine Tool Co., Cleveland, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Watson-Stillman Co., The, New York, N. Y.

#### PRESSES, FORGING.

Aldrich—Aldrich Pump Co., Allentown, Pa.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Chambersburg Engine Co., Chambersburg, Pa.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Garrison, A., Foundry Co., Pittsburgh, Pa.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Mesta—Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Engineering Co., Alliance, Ohio.  
 Reading Iron Co., Reading, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Toledo Machine & Tool Co., Toledo, Ohio.  
 Wickes Bros., Saginaw, Mich.

#### PRESSES, GARAGE.

Manley Mfg. Co., York, Pa.

#### PRESSES, GENERAL PURPOSE.

Greb—The Greb Co., Boston, Mass.

#### PRESSES, HYDRAULIC.

Akron-Williams—Williams Foundry & Machine Co.,  
 Akron, O.  
 Aldrich Pump Co., Allentown, Pa.  
 Allen Machine Co., Erie, Pa.  
 ♦ Bethlehem Steel Co., South Bethlehem, Pa.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Caldwell & Co., E. R., Bradford, Pa. (car wheel).  
 Camden Iron Works, Camden, N. J.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Crawford—Nashua Steam Press & Boiler Works,  
 Nashua, N. H.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Elmes Engineering Works, Chas. F., Chicago, Ill.  
 Excelsior Tool & Machine Co., East St. Louis, Mo.  
 Farquhar, A. B., Co., Ltd., York, Pa.  
 Francis—Francis Co., Chas. E., Rushville, Ind.  
 French Oil Mill Machinery Co., Piqua, O.  
 Galland-Henning Mfg. Co., Milwaukee, Wis.  
 Grote—F. Grote Mfg. Co., Evansville, Ind.  
 Hudson-Sharp Machine Co., Green Bay, Wis.  
 Hydraulic Press Mfg. Co., The, Mt. Gilead, O.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati,  
 Ohio.  
 Little Giant—The Cardwell Machine Co., Richmond,  
 Va.  
 Loremann Bros., Milwaukee, Wis.  
 Lourie—Lourie Mfg. Co., Springfield, Ill.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 Mesta—Mesta Machine Co., Pittsburgh, Pa.  
 Miller, Charles E., Anderson, Ill.  
 Morgan Engineering Co., Alliance, Ohio.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Perrin & Co., Wm. R., Chicago, Ill.  
 R. Dudgeon—Richard Dudgeon, New York.  
 Raquette Foundry & Supply Co., Massena, N. Y.  
 Reading Iron Co., Reading, Pa.  
 Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
 Shriver—Shriver & Co., T., Harrison, N. J.  
 Smith, A. P. Mfg. Co., East Orange, N. J.  
 Southwark Foundry & Machine Co., Philadelphia,  
 Pa.  
 Thomas—Albright Co., Goshen, Ind.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Vulcan Iron Works, Chicago, Ill.  
 Waterbury-Farrel Foundry & Machine Co., Water-  
 bury, Conn.  
 Watson-Stillman Co., The, New York, N. Y.  
 West—West Tire Setter Co., Rochester, N. Y. (Shell  
 Banding).  
 Wickes Bros., Saginaw, Mich.  
 Williams, White & Co., Moline, Ill.  
 Williamson-Harris Mfg. Co., Cordele, Ga.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Wood, William H., Media, Pa.  
 Zeh & Hahnemann Co., Newark, N. J.

#### PRESSES, HYDRO-PNEUMATIC.

Chambersburg Engineering Co., Chambersburg, Pa.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.

#### PRESSES, LEATHER BELTING.

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Elmes, Chas. F., Engineering Works, Chicago, Ill.  
 Watson-Stillman Co., Aldene, N. J.

#### PRESSES, MULTIPLE PLUNGER.

Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Harris—Harris Engineering Co., Bridgeport, Conn.

#### PRESSES, NOTCHING.

Ams—Max Ams Machine Co., Mt. Vernon, N. Y.  
 Southwark Foundry & Machine Co., Philadelphia,  
 Pa.  
 Toledo Machine & Tool Co., The, Toledo, Ohio.

#### PRESSES, PLATE BENDING.

Wickes Bros., Saginaw, Mich.

#### PRESSES, PNEUMATIC.

Slocumb, F. F., & Co., Wilmington, Del.  
 Springfield Machine Tool Co., The, Springfield, O.

#### PRESSES, POWER, INCLINABLE.

Ams, Max, Machine Co., Mt. Vernon, N. Y.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Loshbough-Jordan Tool & Machine Co., Elkhart, Ind.  
 Massillon Foundry & Machine Co., Massillon, Ohio.  
 Rockford Iron Works, Rockford, Ill.  
 Taylor-Shantz Co., Rochester, N. Y.  
 V. & O. Press Co., The, Brooklyn, N. Y.  
 Verdin Kappes & Verdin Co., Cincinnati, Ohio.  
 Walsh Press & Die Co., Chicago, Ill.  
 Willard—The Willard Machine & Tool Co., Cincinnati,  
 Ohio.

#### PRESSES, POWER, KNUCKLE JOINT.

Blake & Johnson Co., Waterbury, Conn.  
 Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Max Ams Machine Co., Mt. Vernon, N. Y.

#### PRESSES, POWER, AND DIES.

Adrian Machine Works, Brooklyn, N. Y.  
 Acme—Acme Machine Works, Chicago, Ill.  
 Allen Machine Co., Erie, Pa.  
 Ams Machine Co., Max, Bridgeport, Conn.  
 Atlas Machine Co., The, Waterbury, Conn.  
 Automatic Machine Co., Bridgeport, Conn.  
 Baird Machine Co., The, Bridgeport, Conn.  
 Billings & Spencer Co., Hartford, Conn.  
 Canton Foundry & Machine Co., Canton, O.  
 Carver, C. R., Co., Philadelphia, Pa.  
 Cleveland—Buckeye Engine Co., Salem, O.  
 Consolidated—E. W. Bliss Co., Brooklyn, N. Y.  
 Cook Co., The H. C., Ansonia, Conn.  
 Coulter & McKenzie Machine Co., The, Bridgeport,  
 Conn.  
 Detroit Model Machine Works, Fremont, O.  
 Draher John, Waterbury, Conn.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Garrison, A., Foundry Co., Pittsburgh, Pa.  
 Harrison & Knight Mfg. Co., Newark, N. J.  
 Heartley Machine Co., Bridgeport, N. J.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Henderer's Sons, A. L., Wilmington, Del.  
 Konigsow Stamping & Tool Works, Cleveland, O.  
 Laffer, Chas., & Co., Brooklyn, N. Y.  
 Lewthwaite, George A. Co., New York, N. Y.  
 Logeman Bros., Milwaukee, Wis.  
 Lucas Patent—Lucas Machine Tool Co., Cleveland, O.  
 McCall, Arthur H., Rochester, N. Y.  
 Manville—The E. J. Manville Machine Co., Water-  
 bury, Conn.  
 Massillon—Massillon Fdy. & Mach. Co., Massillon, O.  
 Merriman—Merriden Press & Drop Co., Meriden, Conn.  
 Michigan—National Fdry. & Machine Co., Ypsilanti,  
 Mich.  
 Morgan Engineering Co., Alliance, O.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Ohi—Geo. A. Ohi & Co., Newark, N. J.  
 Perkins—Perkins Machine Co., Warren, Mass.  
 Robinson, J. M., Mfg. Co., Cincinnati, O.  
 Rockford—Rockford Iron Works, Rockford, Ill.  
 Shuster, F. R., Co., New Haven, Conn.  
 Southwark Foundry & Machine Co., Philadelphia,  
 Pa.  
 Springfield Machine Tool Co., The, Springfield, O.  
 Standard Machinery Co., Providence, R. I.  
 Stiles—E. W. Bliss Co., Brooklyn, N. Y.  
 Stimpson Co., Edwin R., Brooklyn, N. Y.  
 Stoll, D. H., Co., Inc., Buffalo, N. Y.  
 Streine Tool & Mfg. Co., New Bremen, O.  
 Swain, F. J., Mfg. Co., St. Louis, Mo.  
 Taylor & Fenn Co., Hartford, Conn.  
 Taylor, Shantz Co., Rochester, N. Y.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.



Toledo—The Toledo Machine & Tool Co., Toledo, O.  
 Tool Designing & Mfg. Co., Cleveland, O.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 V. & O. Press Co., Glendale, Long Island, N. Y.  
 Verdin, Kappes & Verdin, Cincinnati, O.  
 Waltham Machine Works, Waltham, Mass.  
 Walsh Press & Die Co., Chicago, Ill.  
 Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn.  
 Waterbury Machine Co., Waterbury, Conn.  
 West Michigan Machine & Tool Co., Ltd., Grand Rapids, Mich.  
 Worcester Pressed Steel Co., Worcester, Mass.  
 Yankee—Rowbottom Machine Co., Waterbury, Conn.  
 Zeh & Hahnemann Co., Newark, N. J.

**PRESSES, PUNCHING.**

Adriance—Adriance Machine Works, Brooklyn, N. Y.  
 American Lock Nut Co., Oregon, Ill.  
 Ams—Max Ams Machine Co., Bridgeport, Conn.  
 Armstrong-Blum Mfg. Co., Chicago, Ill.  
 Badger State—Badger-Rock River Machine Co., Janesville, Wis.  
 Badger State Machine Co., Janesville, Wis.  
 Baird Machine Co., The, Oakville, Conn.  
 Beatty Machine & Mfg. Co., Hammond, Ind.  
 Bellefonte Engineering Co., The, Bellefonte, Pa.  
 Beloit—Hendley & Whittemore Co., Beloit, Wis.  
 Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Cleveland—Cleveland Punch & Shear Works Co., Cleveland, O.  
 Clough, R. M., Tolland, Conn.  
 Cosgrove Pat.—Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Covington Machine Co., Covington, Va.  
 Emco—Enterprise Machinery Co., The, Chicago, Ill.  
 Enterprise Machinery Co., The, Chicago, Ill.  
 Excelsior Tool & Machine Co., East St. Louis, Ill.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Harrison & Knight Mfg. Co., Newark, N. J.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hibbard Mfg. Co., Brooklyn, N. Y.  
 Hilles & Jones Co., Wilmington, Del.  
 Loeffler & Co., Chas., Brooklyn, N. Y.  
 Long & Allstatter Co., The, Hamilton, O.  
 Malm Machine Co., Dayton, O.  
 Massillon Foundry & Machine Co., Massillon, O.  
 Mitts & Merrill, Saginaw, Mich.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Niles-Bement-Pond Co., New York.  
 Ohl—Geo. A. Ohl & Co., Newark, N. J.  
 Perkins—Perkins Machine Co., Warren, Mass.  
 Robinson Mfg. Co., The J. M., Cincinnati, O.  
 Royersford Foundry & Machine Co., Royersford, Pa.  
 Scully Steel & Iron Co., Chicago, Ill.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Stiles—E. W. Bliss Co., Brooklyn, N. Y.  
 Swain Mfg. Co., The Fred J., St. Louis, Mo.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.  
 V. & O.—The V. & O. Press Co., Brooklyn, N. Y.  
 Wells, Frank L., Co., Kenosha, Wis.  
 Zeh & Hahnemann Co., Newark, N. J.

**PRESSES, RIVETING.**

(See also "Riveters.")

Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Mesta Machine Co., The, Pittsburgh, Pa.  
 Toledo Machine & Tool Co., The, Toledo, Ohio.

**PRESSES, SCREW.**

Adriance Machine Co., Brooklyn, N. Y.  
 Barnes, W. F. & John Co., Rockford, Ill.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Crawford—Nashua Steam Press & Boiler Works, Nashua, N. H.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.  
 Ferracute Machine Co., Bridgeton, N. J.  
 Francis—Francis Co., Chas. E., Rushville, Ind.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Manhattan Machine & Tool Works, Grand Rapids, Mich.  
 Manley—The Manley Mfg. Co., York, Pa.  
 Perkins—Perkins Machine Co., Warren, Mass.  
 Perrin & Co., Wm. R., Chicago, Ill. (power).  
 Pruyn & Blodau, New York, N. Y.  
 R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Standard Machinery Co., Providence, R. I.  
 Stechler, Chas., Co., The, Chicago, Ill.  
 Toledo Machine & Tool Co., The, Toledo, Ohio.  
 Waterbury Farrel Foundry & Machine Co., The, Waterbury, Conn.  
 Weaver Forcing—Weaver Mfg. Co., Springfield, Ill.  
 Zeh & Hahnemann Co., Newark, N. J.

**PRESSES, SEAL.**

American Casting & Mfg. Corp., Brooklyn, N. Y.  
 Hoggson & Pettis Mfg. Co., New Haven, Conn.  
 Morrill Apex—Chas. Morrill, New York, N. Y.  
 Schwerdtle Stamp Co., Bridgeport, Conn.  
 Utica—Utica Drop Forge & Tool Co., Utica, N. Y.

**PRESSES, STAMPING, GANG, AND TOGGLE DRAWING.**

Bliss, E. W., Co., Brooklyn, N. Y.

**PRESSES, STEAM.**

Southwark Foundry & Machine Co., Philadelphia, Pa.

**PRESSES, STRAIGHTENING, STOCK AND SHAFTING.**

Chambersburg Engineering Co., Chambersburg, Pa.  
 Columbia Mfg. Co., Belleville, Ill.  
 Continental Auto Parts Co., Columbus, Ind.  
 Delano Co., The E. A., Chicago, Ill.  
 Giant—D. H. Potts, Lancaster, Pa.  
 Geier, P. A., Co., Cleveland, O.  
 Hilles & Jones Co., Wilmington, Del.  
 Logemann Bros., Milwaukee, Wis.  
 Little Giant—B. B. Noyes Co., Inc., Greenfield, Mass.  
 Manley Mfg. Co., York, Pa.  
 Metalwood—Metalwood Mfg. Co., Detroit, Mich.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Springfield Machine Tool Co., Springfield, O.  
 Watson-Stillman Co., The, Aldene, N. J.  
 Welch, T. F., & Co., Boston, Mass.

**PRESSES, SUB.**

Blake & Johnson Co., Waterbury, Conn.

**PRESSES, TIE.**

(For removing ties from bales of cotton.)

Howlett—Howlett, P. L., Brownwood, Tex.

**PRESSES, TIE PLATE.**

Wilson—The Watson-Stillman Co., New York, N. Y.

**PRESSES, TIRE FORCING.**

Allen Machine Co., Erie, Pa.

**PRESSES, TOBACCO.**

Economy Baler Co., Ann Arbor, Mich.  
 Grote—F. Grote Mfg. Co., Evansville, Ind.  
 McGowan—John H. McGowan Co., The, Cincinnati, Ohio.

**PRESSES, TOBACCO, ELECTRIC.**

Grote, F., Mfg. Co., Evansville, Ind.

**PRESSES, TRIMMING, METAL WORKING.**

Bliss—E. W. Bliss Co., Brooklyn, N. Y.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Consolidated Press Co., Hastings, Mich.  
 Erie Foundry Co., Erie, Pa.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Massillon—Massillon Fdry. & Mach. Co., Massillon, O.  
 Merrill Bros., Maspeth, New York, N. Y.  
 Perko, Perkins—Perkins Machine Co., Warren, Mass.  
 Toledo—Toledo Machine & Tool Co., Toledo, O.  
 United Engineering & Foundry Co., Pittsburgh, Pa.

**PRESSES, VENEER.**

Advance—Advance Machinery Co., Van Wert, O.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.  
 Francis Co., Chas. E., Rushville, Ind.  
 Handy—Handy Mfg. Co., Chicago, Ill.  
 H. P. M.—The Hydraulic Press Mfg. Co., Mt. Gilead, O.  
 Toledo Machine & Tool Co., Toledo, Ohio.

**PRESSES, WHEEL, HYDRAULIC.**

Alberger Gas Engine Co., Buffalo, N. Y.  
 Black Bros. Co., Mendota, Ill.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 R. Dudgeon—Richard Dudgeon, New York.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.  
 Hydraulic Press Mfg. Co., Mount Gilead, O.  
 Logeman Bros. Co., Milwaukee, Wis.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Watson-Stillman Co., The, New York, N. Y.  
 Zelnicker, Walter A., Supply Co., St. Louis, Mo.

**PRESSES, WIPING WASTE.**

Nugent, Wm. & Co., Chicago, Ill.  
 Strong's Economy—The Strong Machinery & Supply Co., New York, N. Y.

**PRICE BOOKS, PLUMBERS.**

Bareham & Saunders, Rochester, N. Y.  
 Bradford—Wm. A. Bradford, Quincy, Ill.  
 Flower, Frank H., Erie, Pa.

**PRIMERS.**

Carleton—The Carleton Co., Boston, Mass.  
 Copley—Bay State Pump Co., South Boston, Mass.  
 Crone, F. G., Buffalo, N. Y.  
 ♦ Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.

**PRODUCERS, GAS.**

Akerlund & Semmes, Inc., New York, N. Y.  
 Amsler, Walter O., Pittsburgh, Pa.  
 Camden Iron Works, Camden, N. J.  
 Chapman—Chapman Engineering Co. (mechanical), Mount Vernon, Ohio.  
 DuBois Iron Works, DuBois, Pa.  
 Gas Machinery Co., The, Cleveland, O.  
 Griscom-Russell Co., The, New York.  
 Hagan, Geo. J., Pittsburgh, Pa.  
 International Clay Machinery Co., Dayton, O.  
 Koppers Co., The, Pittsburgh, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Milwaukee Reliance Boiler Works, Milwaukee, Wis.  
 Morgan Construction Co., Worcester, Mass.  
 Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
 New Era—Portsmouth Engine Co., Portsmouth, O.  
 Otto Engine Mfg. Co., Philadelphia, Pa.  
 Power & Mining Machinery Co., New York, N. Y.  
 Smith—The Smith Gas Engineering Co., Dayton, O.  
 Syracuse—Syracuse Industrial Gas Co., Syracuse, N. Y.  
 20th Century—C. M. Kemp Mfg. Co., Baltimore, Md.  
 Wellman-Seaver-Morgan Co., Cleveland, O.  
 Westinghouse—Westinghouse Machine Co., The, East Pittsburgh, Pa.  
 Wood & Co., R. D., Philadelphia, Pa.

**FRONTS, VALVE.**

Columbus Brass Co., Columbus, Ohio.  
 Hays Mfg. Co., Erie, Pa.  
 Lord—The C. H. Yonts Co., Meadville, Pa.

**PROTECTORS, BLOW-OFF.**

Mather, Edmund, Co., Harrisburg, Pa.

**PROTECTORS, BOILER TUBE.**

Cruise—Cruise & Co., Elizabeth, N. J.

**PROTECTORS, BOILER GIRTH SEAM.**

National—National Boiler & Protector Co., Dayton, O.

**PROTECTORS, CAP, WATERPROOF, MINING.**

Hercules Powder Co., Wilmington, Del.

**PROTECTORS, DOOR ARCH.**

The Lamprey Co., Westfield, Mass.

**PROTECTORS, EAR, FOR BOILERMAKERS, ETC.**

Grammes & Sons, L. F., Allentown, Pa.

**PROTECTORS, EYE, AND GOGGLES, FOR INDUSTRIAL WORKERS.**

Adjustoglas—The Safety Equipment Service Co., Cleveland, Ohio.  
 Autocrat—American Thermo-Ware Co., New York, N. Y.  
 Chicago Eye Shield Co., Chicago, Ill.  
 Fox—Fox Supply Co., Brooklyn, Wis.  
 Flits U—Grammes & Sons, L. F., Allentown, Pa.  
 Hardy, F. A., & Co., Chicago, Ill.  
 Johnston Optical Co., Detroit, Mich.  
 Saniglas Goggles—Julius King Optical Co., New York, N. Y.  
 Willson, Underwriters, Industro—Willson Goggles, Inc., Reading, Pa.

**PROTECTORS, FOOT AND LEG, FOR FOUNDRYMEN.**

♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 Holcomb Safety Garment Co., Chicago, Ill.

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Canfield—H. O. Canfield Co., Bridgeport, Conn.

**PROTRACTORS.**

Besly, Chas. H. & Co., Chicago, Ill.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Massachusetts Tool Co., Greenfield, Mass.  
 Post, Fred'k., Co., Chicago, Ill.  
 Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Shaver—Union Tool Co., Orange, Mass. (Bevel.)  
 Starrett, L. S., Co., Athol, Mass. (draftsman's and universal bevel).

**PROVERS, GAS AND WATER METER.**

Equitable Emco—Equitable Meter Co., Pittsburgh, Pa.  
 Laporte Gas Meter Co., Laporte, Ind.  
 Pittsburgh Meter Co., East Pittsburgh, Pa.  
 Standard Meter Co., The, Philadelphia, Pa.

**PSYCHROMETERS.**

Moeller, A. E., Brooklyn, N. Y.

**FULLERS, CAR.**

Biesanz Stone Co., Winona, Minn.  
 Link-Belt Company, Chicago, Ill.  
 National Hoisting Engine Co., Harrison, N. J.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Wolf Company, The, Chambersburg, Pa.

**FULLERS, COTTER PIN.**

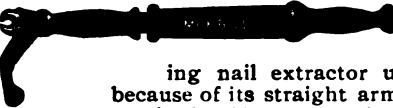
Goodell-Pratt Co., Greenfield, Mass.

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Lonergan—J. E. Lonergan Co., Philadelphia, Pa.

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Bridgeport Hardware Mfg. Co., Bridgeport, Conn.  
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 Sampson—L. F. Grammes & Sons, Allentown, Pa.  
 Verona Tool Wks., Pittsburgh, Pa.  
 Warwood—Warwood Tool Co., Wheeling, W. Va.

**FULLERS, PLANK.**

Kraeuter & Co., Inc., Newark, N. J.  
 Pollard, Jos. G., Brooklyn, N. Y.

**FULLERS, POST.**

Peerless Lifter—Peerless Tool Co., Chicago, Ill.

**FULLERS, STAPLE.**

Irvington Mfg. Co., The, Irvington, N. J.  
 M. & M.—Maxson & Maxson Co., West Edmeston, N. Y.  
 Utica—Utica Drop Forge & Tool Co., Utica, N. Y.

**FULLERS, STUMP.**

Clyde Iron Works, Duluth, Minn.  
 Hercules Mfg. Co., Centerville, Ia.  
 La Plant-Choate Mfg. Co., Cedar Rapids, Iowa.  
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Little Giant, Big Buster—Premier Electric Co., Chicago, Ill.

### PULLEYS, BALL BEARING.

Automatic Damper Co., Wauwatosa, Wis.  
Hess-Bright Mfg. Co., Philadelphia, Pa.  
Pyott, Geo. W., Co., Chicago, Ill.  
♦ S. K. F.—Chicago Pulley & Shafting Co., Chicago, Ill.

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Allis-Chalmers Co., Milwaukee, Wis.  
American Tool & Machine Co., Boston, Mass.  
Atlas Machine Co., Nashville, Tenn.  
Badger—Badger Gas & Gasoline Engine Co., Kansas City, Kan.  
Bailey-Burruss Mfg. Co., Atlanta, Ga.  
Barnard & Leas Mfg. Co., Moline, Ill.  
Barnard Mfg. Co., Spokane, Wash.  
Batavia Engineering Works, Batavia, Ill.  
Bauroth Bros. Co., Springfield, O.  
Birkle Machine Works, Chicago, Ill.  
Blake, H. A. & Son, Cheboygan, Mich.  
Blymer Iron Works Co., The, Cincinnati, O.  
♦ Bond Foundry & Machine Co., Manheim, Pa.  
Brightman Machine Co., The, Cleveland, O.  
Brown Co., The A. & F. New York, N. Y.  
Brown—The Brown Clutch Co., Sandusky, O.  
Builders Iron Foundry, Providence, R. I.  
Caldwell & Son Co., H. W., Chicago, Ill.  
♦ Chain Belt Co., Milwaukee, Wis.  
Christiana Machine Co., Christiana, Pa.  
Concord Foundry and Machine Co., Concord, N. H.  
Cresson-Morris Co., Philadelphia, Pa.  
Diamond Iron Works, Minneapolis, Minn.  
Diamond B. Neverslip—The Belden Machine Co., New Haven, Conn.  
Dow, L. B., Inc., Keene, N. H.  
Eastwood Co., Benjamin, Paterson, N. J.  
Falls Clutch & Machinery Co., Cuyahoga Falls, O.  
Franklin Machine Co., Providence, R. I.  
Fritz, Geo. J., Foundry & Machine Co., St. Louis, Mo.  
Golden's Foundry & Machine Co., Columbus, Ga.  
Great Western Mfg. Co., Leavenworth, Kan.  
Hanson Clutch & Machinery Co., Tiffin, O.  
Hartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
Henderson, W. K., Iron Works & Supply Co., Shreveport, La.  
Hess-Snyder Co., The, Massillon, O.  
♦ Hill Clutch Co., The, Cleveland, O.  
Howell & Co., R. R., Minneapolis, Minn.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Hunter Machine Co., James, North Adams, Mass.  
Huntsville Foundry & Machine Works, Huntsville, Ala.  
♦ Jeffrey Mfg. Co., The, Columbus, O.  
♦ J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
♦ Jones Foundry & Machine Co., W. A., Chicago, Ill.  
♦ Lake Shore Engine Works, Marquette, Mich.  
Lawton, C. A., Co., The, De Pere, Wis.  
Lindahl Machine Co., Henry, Chicago, Ill.  
Link-Belt Company, Chicago, Ill.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Mecklenburg Iron Works, Charlotte, N. C.  
♦ Medart Patent Pulley Co., St. Louis, Mo.  
♦ Mesta Machine Co., Pittsburgh, Pa.  
Minster Machine Co., The, Minster, O.  
♦ Moore & White Co., The, Philadelphia, Pa.  
♦ National—National Foundry Mfg. & Supply Co., Williamsport, Pa.  
Naylor Bros., Peekskill, N. Y.  
Nordyke & Marmon Co., Indianapolis, Ind.  
O. K.—O. K. Clutch & Machinery Co., Columbus, Pa.

Phillips Pressed Steel Pulley Works, Philadelphia, Pa. (small).

Poole Engineering & Machine Co., Baltimore, Md.  
Porter Machine Co., Wooster, O.  
Prescott Co., The, Menominee, Mich.  
Pyott Foundry Co., Chicago, Ill.  
Pyott, Geo. W. Co., Chicago, Ill.  
Reading Scale & Machine Co., Reading, Pa.  
Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
Red Face—Pyott Foundry Co., Philadelphia, Pa.  
♦ Roversford Foundry & Machine Co., Philadelphia, Pa.  
♦ Salem Foundry & Machine Works, Salem, Va.  
Schaefer Mfg. Co., The, Birmingham, Ala.  
Schofield Iron Works, Macon, Ga.  
Schultz, A. L. & Son, Chicago, Ill.  
Sellers, William, & Co., Inc., Philadelphia, Pa.  
Smith Machine Works, R. L., Lincoln, Neb.  
Sprout, Waldron & Co., Muncy, Pa.  
♦ Standard—Dodge Sales & Engineering Co., Mishawaka, Ind.  
Standard Pulley Co., Cincinnati, O.  
Stephens-Adamson Mfg. Co., Aurora, Ill.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Townsend Furnace & Machine Shop Co., Albany, N. Y.  
Upton & Gilman Machine Co., Lowell, Mass.  
♦ Valley Iron Works, Williamsport, Pa.  
♦ Webster Mfg. Co., Chicago, Ill.  
Welch, T. F. & Co., Boston, Mass.  
Weller Mfg. Co., Chicago, Ill.  
Wheland—Wheland Co., The, Chattanooga, Tenn.  
Wolf Co., The, Chambersburg, Pa.

### PULLEYS, CAST IRON, GROOVED.

Birkle Machine Works, Chicago, Ill.  
Boston Gear Works, Quincy, Mass.  
Link-Belt Company, Chicago and Philadelphia.

### PULLEYS, CAST IRON, STEEL RIM.

♦ Saint Louis—Medart Patent Pulley Co., St. Louis, Mo.

### PULLEYS, CORK INSERT.

♦ American—American Pulley Co., Philadelphia, Pa.  
♦ Birkle Machine Works, Chicago, Ill.  
♦ Carey, W. W. Co., Lowell, Mass.  
♦ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.  
♦ Limestone—Ohio Valley Pulley Works, Inc., Maysville, Ky.  
♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

### PULLEYS, BOARD DROP HAMMER.

Composition Wood Products Co., Chicago, Ill.  
♦ Saginaw Mfg. Co., Saginaw, Mich.

### PULLEYS, DRUM, FOR CONVEYORS, ETC.

♦ The Ohio Valley Pulley Works, Inc., Maysville, Ky.

### PULLEYS, DYNAMO.

♦ American—American Pulley Co., Philadelphia, Pa.  
♦ American Tool & Machine Co., Boston, Mass.  
♦ Birkle Machine Works, Chicago, Ill.  
♦ Composition Wood Products Co., Chicago, Ill.  
♦ Electric—Erie Clutch & Pulley Co., Erie, Pa.  
♦ Hill Clutch Co., The, Cleveland, O.  
♦ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.  
♦ Valley Iron Works, Williamsport, Pa.  
♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

### PULLEYS, FLANGED.

American Tool & Machine Co., Boston, Mass.  
♦ American—American Pulley Co., Philadelphia, Pa.  
♦ Birkle Machine Works, Chicago, Ill.  
Composition Wood Products Co., Chicago, Ill.

- ◆ Excelsior Pulley Co., Cuba, N. Y.
- ◆ **Hill Clutch Co., The**, Cleveland, O.
- ◆ Hunt—Rodney Hunt Machine Co., Orange, Mass.
- ◆ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ◆ Limestone—Ohio Valley Pulley Works, Inc., Maysville, Ky.
- ◆ Link-Belt Company, Chicago and Philadelphia.
- ◆ **Medart Patent Pulley Co.**, St. Louis, Mo.
- ◆ Prescott Co., The, Menominee, Mich.
- ◆ Pyott, Geo. W. Co., Chicago, Ill.
- ◆ Pyott Foundry Co., Chicago, Ill.
- ◆ The Reeves—Reeves Pulley Co., Columbus, Ind.
- ◆ Valley Iron Works, Williamsport, Pa.
- ◆ Webster Mfg. Co., Chicago, Ill.
- ◆ Wood's, T. B., Sons Co., Chambersburg, Pa.

**PULLEYS, FLY WHEEL.**

(See Wheels, Fly.)

**PULLEYS, FRICTION CLUTCH.**

- American Tool & Machine Co., Boston, Mass.
- Appleton—Appleton Mfg. Co., Batavia, Ill.
- Baird Machine Co., The, Bridgeport, Conn.
- Bauroth—Bauroth Bros., Springfield, O.
- Bierman—Strite Governor Pulley Co., Minneapolis, Minn.
- Brightman Machine Co., The, Cleveland, O.
- Brown—The A. & F. Brown Co., New York, N. Y.
- Brown Machine & Engine Co., Lansing, Mich.
- Brown & Sharpe Mfg. Co., Providence, R. I.
- ◆ B & C—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ◆ Caldwell, H. W., & Son Co., Chicago, Ill.
- ◆ C-M-T—Conway & Co., Cincinnati, O.
- ◆ Competitor, Interchange, Oil Tight—Kinney Mfg. Co., Boston, Mass.
- ◆ Conway Clutch Co., Cincinnati, O.
- ◆ Cresson-Morris Co., Philadelphia, Pa.
- ◆ Diamond—Diamond State Fibre Co., Bridgeport, Pa.
- ◆ Dodge—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ◆ Eastern Machinery Co., New Haven, Conn.
- ◆ Eclipse—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Falls—Falls Clutch & Machinery Co., Cuyahoga Falls, Ohio.
- ◆ Farrar & Trefts, Buffalo, N. Y.
- ◆ Friction Pulley & Machine Works, Sandy Hill, N. Y.
- ◆ Gund Mfg. Co., La Crosse, Wis.
- ◆ Hanson—The Hanson Clutch & Machinery Co., Tiffin, Ohio.
- ◆ Havana Double Grip—Havana Mfg. Co., Havana, Ill.
- ◆ Herken, Jr.—Minster Machine Co., Minster, O.
- ◆ Hess-Snyder Co., The, Massillon, O.
- ◆ **Hill (Smith Type)—The Hill Clutch Co.**, Cleveland, O.
- ◆ Hobbs Mfg. Co., Worcester, Mass.
- ◆ Holland Engine Co., Inc., Holland, Mich.
- ◆ Hunt—Rodney Hunt Machine Co., Orange, Mass.
- ◆ Hunter—James Hunter Machine Co., North Adams, Mass.
- ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- ◆ Lawton, C. A., Co., The, De Pere, Wis.
- ◆ Lemley—W. A. Jones Foundry & Machine Co., Chicago, Ill.
- ◆ Link-Belt Company, Chicago and Philadelphia.
- ◆ McMahon & Co., Worcester, Mass.
- ◆ Mason & Co., Inc., Volney W., Providence, R. I.
- ◆ **Medart Patent Pulley Co.**, St. Louis, Mo.
- ◆ Menasha Clutch Pulley & Machinery Co., Menasha, Wis.
- ◆ Moore & White Co., The, Philadelphia, Pa.
- ◆ Moore—Master Mfg. Co., Chicago, Ill.
- ◆ Naylor Bros., Peekskill, N. Y.
- ◆ O. K.—O. K. Clutch & Machinery Co., Columbus, Pa.
- ◆ **Oil Tight—Kinney Mfg. Co.**, Boston, Mass.
- ◆ Porter Machine Co., Wooster, O. (transmission and tractor).
- ◆ Prescott Co., The, Menominee, Mich.
- ◆ Pyott, Geo. W. Co., Chicago, Ill.
- ◆ The Reeves—Reeves Pulley Co., Columbus, Ind.
- ◆ Rieppel's—Cowanesque Valley Iron Works, Cowanesque, Pa.
- ◆ Schultz, A. L., & Sons, Chicago, Ill.
- ◆ Sinclair-Scott Co., The, Baltimore, Md.
- ◆ Smith—Diamond Textile Machine Works, Philadelphia, Pa.
- ◆ **Smith Type Hill—Hill Clutch Co.**, The, Cleveland, O.
- ◆ Standard—Erie Clutch & Pulley Co., Erie, Pa.
- ◆ Valley Iron Works, Williamsport, Pa.
- ◆ Webster Mfg. Co., Tiffin, Ohio.
- ◆ Weller Mfg. Co., Chicago, Ill.
- ◆ Wheaton, C. M., Providence, R. I.
- ◆ Wolf Co., Chambersburg, Pa.
- ◆ Wood's, T. B., Sons Co., Chambersburg, Pa.

**PULLEYS, GOVERNOR.**

- Brownwall Engine & Pulley Co., Lansing, Mich.
- Strite—Strite Governor Pulley Co., Minneapolis, Minn.
- ◆ Woods, T. B. Sons Co., Chambersburg, Pa.

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- ◆ Hunt—Rodney Hunt Machine Co., Orange, Mass.
- ◆ Wheaton, C. M., Providence, R. I.
- ◆ Wood's Sons Co., T. B., Chambersburg, Pa.

**PULLEYS, LEATHER RIM.**

Belt Grip—Belt Grip Pulley Co., Buffalo, N. Y.

**PULLEYS, LOOSE.**

- American Tool & Machine Co., Boston, Mass.
- ◆ American—American Pulley Co., Philadelphia, Pa.
- ◆ Arguto—Arguto Oilless Bearing Co., Wayne Junction, Pa. (Bearings.)
- ◆ Barnard & Leas Mfg. Co., Moline, Ill.
- ◆ Birkle Machine Works, Chicago, Ill.
- ◆ Chapman—Transmission Ball Bearing Co., Buffalo, N. Y.
- ◆ Daggett, S. K. F.—Chicago Pulley & Shafting Co., Chicago, Ill.
- ◆ Delano Co., The E. A., Chicago, Ill.
- ◆ Gilbert—Saginaw Mfg. Co., Saginaw, Mich.
- ◆ Hanson Clutch & Machinery Co., Tiffin, Ohio.
- ◆ Hess-Bright Mfg. Co., Philadelphia, Pa.
- ◆ **Hill Clutch Co., The**, Cleveland, O.
- ◆ Hunt—Rodney Hunt Machine Co., Orange, Mass.
- ◆ Hunter Machine Co., James, North Adams, Mass.
- ◆ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ◆ Lewellen Mfg. Co., Columbus, Ind. (Ball bearing.)
- ◆ Limestone—Ohio Valley Pulley Works, Inc., Maysville, Ky.
- ◆ **Medart Patent Pulley Co.**, St. Louis, Mo.
- ◆ Nelson Patent—Wilmarth & Morman Co., Grand Rapids, Mich.
- ◆ Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- ◆ Pyott Foundry Co., Chicago, Ill.
- ◆ The Reeves—Reeves Pulley Co., Columbus, Ind.
- ◆ S. K. F. Industries, Inc., New York, N. Y.
- ◆ Valley Iron Works, Williamsport, Pa.
- ◆ Webster Mfg. Co., Chicago, Ill.
- ◆ Wheaton, C. M., Providence, R. I.
- ◆ Wood's Sons Co., T. B., Chambersburg, Pa.

**PULLEYS, MAGNETIC.**

Magnetic Mfg. Co., Milwaukee, Wis.

**PULLEYS, MOTOR.**

- Birkle Machine Works, Chicago, Ill. (Iron.)
- Composition Wood Products Co., Chicago, Ill.
- Hanson Clutch & Machinery Co., Tiffin, Ohio.
- Lasure Friction Clutch Co., Watertown, Wis.
- ◆ Ohio Valley Pulley Works, Inc., Maysville, Ky.
- ◆ Saginaw Mfg. Co., Saginaw, Mich.
- ◆ Woods, T. B. Sons Co., Chambersburg, Pa.

**PULLEYS AND WHEELS, PAPER, FRICTION.**

- Composition Wood Products Co., Chicago, Ill.
- Meesse & Gottfried Co., San Francisco, Cal.
- Rockwood—The Rockwood Mfg. Co., Indianapolis, Ind.
- Wolf Co., The, Chambersburg, Pa.
- Superior—Superior Pulley Co., St. Louis, Mo.

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**PULLEYS, ROPE.**

(See Sheaves, Rope.)

**PULLEYS, SPLIT, CAST IRON.**

(See "Pulleys, Cast Iron.")

**PULLEYS, STEEL, SPLIT, PRESSED AND WROUGHT.**

- ♦ American—American Pulley Co., Philadelphia, Pa.
- ♦ Barry—R. & J. Dick Co., Inc., Passaic, N. J.
- ♦ Barry—Barry Co., Muscatine, Ia.
- ♦ Hercules—Medart Patent Pulley Co., St. Louis, Mo. (Steel rim.)
- ♦ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ M-G—Meese & Gottfried Co., San Francisco, Cal. (steel rim).
- ♦ National—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Oneida—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Phillips Pressed Steel Pulley Works, Philadelphia, Pa.
- ♦ Wolf Co., The, Chambersburg, Pa.
- ♦ Worcester Pressed Steel Co., Worcester, Mass.

**PULLEYS, STEP AND TAPER CONE.**

- ♦ American Tool & Machine Co., Boston, Mass.
- ♦ Birkle Machine Works, Chicago, Ill.
- ♦ Composition Wood Products Co., Chicago, Ill.
- ♦ Dodge Mfg. Co., Mishawaka, Ind.
- ♦ Excelsior Pulley Co., Cuba, N. Y.
- ♦ Hill Clutch Co., The, Cleveland, O.
- ♦ Lawton, C. A. Co., The, De Pere, Wis.
- ♦ Limestone—Ohio Valley Pulley Wks., Inc., Maysville, Ky.
- ♦ The Reeves—Reeves Pulley Co., Columbus, Ind.
- ♦ Saginaw Mfg. Co., Saginaw, Mich.
- ♦ Woods, T. B. Sons Co., Chambersburg, Pa.

**PULLEYS, TEXTILE, SPECIAL.**

- ♦ The Ohio Valley Pulley Works, Inc., Maysville, Ky.

**PULLEYS, WOOD RIM, IRON CENTER.**

- ♦ Carey, W. W. Co., Lowell, Mass.
- ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Falls Clutch & Machine Co., Cuyahoga Falls, N. Y.
- ♦ Gilbert—Saginaw Mfg. Co., Saginaw, Mich.
- ♦ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Limestone—Ohio Valley Pulley Wks., Inc., Maysville, Ky.
- ♦ Reading Iron Center—Reading Wood Pulley Co., Reading, Pa.
- ♦ Reliable Erie—Erie Clutch & Machinery Co., Erie, Pa.
- ♦ Standard Clutch Mfg. Co., Sidney, O.

**PULLEYS, WOOD, SPLIT.**

- ♦ Dodge Independence—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Eclipse—Eclipse Wood Pulley Co., Berlin, Pa.
- ♦ Electric—Erie Clutch & Pulley Co., Erie, Pa.
- ♦ Estes, E. B. & Sons, New York, N. Y. (Small.)
- ♦ Excelsior—Excelsior Pulley Co., Inc., Cuba, N. Y.
- ♦ Forster—John M. Forster Co., Rochester, N. Y.
- ♦ Gilbert—Saginaw Mfg. Co., Saginaw, Mich.
- ♦ Independence—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Keystone—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Lawson—The Menasha Wood Split Pulley Co., Menasha, Wis.
- ♦ Limestone—The Ohio Valley Pulley Works, Inc., Maysville, Ky.
- ♦ Medart Patent Pulley Co., St. Louis, Mo.
- ♦ Menasha—The Menasha Wood Split Pulley Co., Menasha, Wis.
- ♦ Oneida—Dodge Sales & Engineering Co., Mishawaka, Ind.
- ♦ Oneida Wood Pulley Co., Inc., Oneida, N. Y.
- ♦ Portland—Portland Pulley Co., Portland, Ore.
- ♦ The Reeves—Reeves Pulley Co., Columbus, Ind.
- ♦ Tornado—Erie Clutch & Pulley Co., Erie, Pa.
- ♦ Saint Louis—Medart Patent Pulley Co., St. Louis, Mo.
- ♦ Universal—Reading Wood Pulley Co., Reading, Pa.

**PULLEYS, BELL.**

- ♦ Peck, Stow & Wilcox Co., New York, N. Y.
- ♦ Powell Co., The Wm., Cincinnati, O.
- ♦ Russell & Irwin Mfg. Co., New York, N. Y.
- ♦ Wilcox, Crittenden & Co., Middletown, Conn.
- ♦ Yale & Towne Mfg. Co., New York, N. Y.

**PULLEYS, CLOSET.**

- ♦ American Brass & Copper Co., The, New York, N. Y.
- ♦ Berns, Otto, Newark, N. J.
- ♦ C. & D.—Coyne & Delany Co., Brooklyn, N. Y.
- ♦ Celluvarno—The Silcock-Miller Co., South Orange, N. J.
- ♦ China—Maddock's Sons Co., Thomas, Trenton, N. J.
- ♦ Durst Mfg. Co., The, New York, N. Y.
- ♦ Em-Bas—The Meyer-Sniffen Co., New York, N. Y.

Frank Bros., New York, N. Y.  
 Garrison Brass & Machine Works, New York, N. Y.  
 Hutter, Karl, Inc., New York, N. Y. (china).  
 Kupferle Foundry Co., John C., St. Louis, Mo.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
 Simco—Silcock-Miller Co., S. Orange, N. J. (white).  
 Trenton Potteries Co., The, Trenton, N. J.  
 Williams & Marvin Mfg. Co., Deep River, Conn.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**PULMONES, FOR RESUSCITATION.**

American Atmos. Corp., Pittsburgh, Pa.  
 Lyon Breathing Machine—Cleveland Breathing Machine Co., Cleveland, O.  
 Lungmotor—Life Saving Devices Co., Chicago, Ill.

**PULVERIZERS, AIR SEPARATION.**

(See also "Machinery, Crushing and Pulverizing.")

K. B.—K. B. Pulverizer Co., Inc., New York, N. Y.  
 Pratt Engineering & Machine Co., Atlanta, Ga.  
 Stroud, E. H. & Co., Chicago, Ill. (Air and screen separation.)  
 Sturtevant Mill Co., Boston, Mass.

**PUMPS, ACID.**

Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 American—American Steam Pump Co., Battle Creek, Mich.  
 American Hard Rubber Co., New York, N. Y.  
 American—American Well Works, Aurora, Ill.  
 Beach-Russ Co., New York, N. Y.  
 Blackmer Rotary Pump Co., Petoskey, Mich.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Chicago Pump Co., Chicago, Ill.  
 Colco—The Lucas Miner Tool & Production Co., Dayton, O.  
 Davidson, M. T., Co., New York, N. Y.  
 Dayton-Dowd Co., Quincy, Ill.  
 Gardner Governor Co., Quincy, Ill.  
 Goulds—Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 H. & V. W.—Hanson & Van Winkle Co., Newark, N. J.  
 McGowan Co., The John H., Cincinnati, O.  
 Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Midwest Engine Co., Indianapolis, Ind.  
 Nassau Pump & Valve Co., Rockville Center, N. Y.  
 Price, G. W., Pump & Engine Co., San Francisco, Cal.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Soo—Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Union Steam Pump Co., Battle Creek, Mich.  
 United Lead Co., New York, N. Y.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Wagoner Steam Pump Works, Canton, Ohio.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**PUMPS, AIR DRIVEN.**

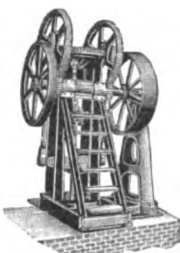
Union Steam Pump Co., Battle Creek, Mich.

**PUMPS, AIR AND CIRCULATING.**

- ♦ American Marsh—American Steam Pump Co., Battle Creek, Mich.
- ♦ Chalmers Pump & Mfg. Co., Lima, Ohio.
- ♦ Chicago Pump Co., Chicago, Ill.
- ♦ Clayton Air Compressor Works, New York, N. Y.
- ♦ Connersville Blower Co., Connersville, Ind.
- ♦ Davidson, M. T., Co., New York, N. Y.
- ♦ Dean Bros., Steam Pump Works, Indianapolis, Ind.
- ♦ Economy—Economy Pumping Mach. Co., Chicago, Ill.
- ♦ Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.
- ♦ Famous—Lucas-Miner Tool & Production Co., Dayton, Ohio.
- ♦ Gardner Governor Co., The, Quincy, Ill.
- ♦ Garrett, W. D., & Co., New York, N. Y.
- ♦ Garrison Brass & Machine Works, New York, N. Y.
- ♦ Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ♦ Hall Steam Pump Co., Pittsburgh, Pa.
- ♦ Hancock Mfg. Co., Charlotte, Mich. (hand).
- ♦ Humphrey & Smyth Patents—Humphrey Gas Pump Co., Syracuse, N. Y.
- ♦ Improved Triumph—The Ohio Pump & Brass Co., Columbus, O.
- ♦ Kingsford Foundry & Machine Works, Oswego, N. Y.
- ♦ Lawrence Pump & Engine Co., Lawrence, Mass.
- ♦ Lea Equipment Co., Philadelphia, Pa.
- ♦ Lucas-Miner Tool & Production Co., Dayton, O.
- ♦ Marine Iron Works, Chicago, Ill.
- ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.
- ♦ McGowan Co., The John H., Cincinnati, O.
- ♦ Mesta Machine Co., Pittsburgh, Pa.
- ♦ Midwest Engine Co., Indianapolis, Ind.
- ♦ Morris Machine Works, Baldwinville, N. Y.
- ♦ Myers—J. E. Myers & Bro., Ashland, O.
- ♦ National Foundry & Machine Co., Louisville, Ky.
- ♦ Ross Heater & Mfg. Co., Inc., Buffalo, N. Y.
- ♦ Roturbo—Manistee Iron Works Co., Manistee, Mich.

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Terry Steam Turbine Co., Hartford, Conn.  
Twinvolute Pump & Mfg. Co., Newark, N. J.  
♦ Union Steam Pump Co., Battle Creek, Mich.  
United Brass & Aluminum Mfg. Co., Port Huron, Mich.  
VanWie Pump Co., Syracuse, N. Y.  
Worthington—Worthington Pump & Machinery Corp., New York.  
Yeomans Bros. Co., Chicago, Ill.

### PUMPS, AIR, ELECTRIC.

A. F. S. Machine Co., Toledo, Ohio.  
♦ American—American Steam Pump Co., Battle Creek, Mich.  
Automatic Electric Pump Co., Davenport, Ia.  
Bishop & Babcock Co., The, Cleveland, O.  
Durite—The Lucas Miner Pump Co., Dayton, O.  
Economy Pumping Machinery Co., Chicago, Ill.  
Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Lucas Miner Tool & Production Co., Dayton, O.  
♦ McGowan Co., The John H., Cincinnati, O.

### PUMPS, AIR, POWER.

(See also "Compressors, Air.")

A. F. S. Machine Co., Toledo, O.  
Automatic—Ten Eyck Pump Co., Auburn, N. Y.  
Champion—The Cleveland Faucet Co., Cleveland, O.  
Cleveland—Bishop-Babcock Co., Cleveland, O.  
Cook, A. D., Lawrenceburg, Ind.  
Crowell Mfg. Co., Brooklyn, N. Y.  
Dean Bros. Steam Pump Works, Indianapolis, Ind.  
♦ Deming Co., The, Salem, O.  
Douglas, W. & B., Middletown, Conn.  
Eclipse—United Iron Works, Spokane, Wash.  
Eureka—Bishop-Babcock Co., Cleveland, O.  
Hall—Hall Steam Pump Co., Pittsburgh, Pa.  
Harris Air Pump Co., Indianapolis, Ind.  
Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
Humphreys Mfg. Co., The, Mansfield, O.  
Ingersoll-Rand Co., New York, N. Y.  
Kirkup & Co., Robert, Cincinnati, O.  
Leader Iron Works, Decatur, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
Miller's—Charles E. Miller, Anderson, Ind.  
Milwaukee Air Power Pump Co., Milwaukee, Wis.  
New Lightning—Goulds Mfg. Co., The, Seneca Falls, N. Y.  
Red Jacket Mfg. Co., Davenport, Ia.  
Roberts' Gem—Roberts & Co., Geo. J., Dayton, O.  
Rosenberg Motor & Mfg. Co., A., Baltimore, Md.  
Roturbo—Manistee Iron Works Co., Manistee, Mich.  
Rumsey's—Rumsey & Co., Ltd., Seneca Falls, N. Y.  
Smith-Valle—The Platt Iron Works Co., Dayton, O.  
Southwark Foundry & Machine Co., Philadelphia, Pa.  
Triumph—The Ohio Pump & Brass Co., Columbus, O.  
♦ Union Steam Pump Co., Battle Creek, Mich.  
Vilter Mfg. Co., The, Milwaukee, Wis.  
Vogt Brothers Mfg. Co., Louisville, Ky.  
Weber—Weber Subterranean Pump Co., New York, N. Y.  
Westinghouse Leblanc—Westinghouse Machine Co., East Pittsburgh, Pa. (hydraulic).  
Wheeler-Edwards—The Wheeler Condenser & Engineering Co., Carteret, N. J.  
Worthington Pump & Machinery Corp., New York, N. Y.

### PUMPS, ARTESIAN OR DEEP WELL.

Allrite—Lucas-Miner Tool & Production Co., Dayton, Ohio.  
Allrite—The Lucas Pump Co., Chicago, Ill.  
American—The American Well Works, Aurora, Ill.  
Barnes Mfg. Co., The, Mansfield, O.  
Bolecourt—Midland Brass Works, Fort Worth, Tex.  
Boys, Porter & Co., Connellsville, Pa.

Buckeye—Mast, Foos & Co., Springfield, O.  
Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
Chapman Plumbing Sup Co., Canton, Ohio.  
Chicago Pump Co., Chicago, Ill.  
Chicago Well Supply Co., Chicago, Ill.  
Chippewa—Chippewa Pump Co., Chippewa Falls, Wis.

Church, Stephen B., Seymour, Conn.  
Clark, H. W., Co., Mattoon, Ill.  
Columbiana Pump Co., Columbiana, O.  
Columbus Steam Pump Works Co., The, Columbus, O.  
Cook, A. D., Lawrenceburg, Ind.  
"Davidson"—Davidson, M. T. Co., New York, N. Y.  
Davis-Hansen Pump Co., Oshkosh, Wis.  
Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
D—Dempster Mfg. & Sup. Co., Des Moines, Iowa.

♦ Deming Co., The, Salem, Ohio.  
Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.  
Doran—Doran Mfg. Co., Chicago, Ill.  
Douglas—W. & B. Douglas, Middletown, Conn.  
Downie—Keystone Driller Co., Beaver Falls, Pa.  
Duplex—Duplex Mfg. Co., Superior, Wis.  
East Iron & Machine Co., The, Lima, Ohio.  
Eclipse—Fairbanks, Morse & Co., Chicago, Ill.  
Erb, W. B., & Co., Chicago, Ill.  
Farrar Pump & Machinery Co., St. Louis, Mo.  
Foster Pump Works, Brooklyn, N. Y.  
Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Hartig Standard Gas Engine Co., Newark, N. J.  
Hayes—Hayes Pump & Planter Co., Galva, Ill.  
Hooker Steam Pump Works, St. Louis, Mo.  
Hudson-Sharp Machine Co., Green Bay, Wis.  
Humphreys Mfg. Co., The, Mansfield, O.  
Indiana Air Pump Co., Indianapolis, Ind.  
Jackson—Byron Jackson Iron Works, San Francisco.  
Kewanee Private Utilities Co., Kewanee, Ill.  
Kingsford Foundry & Machine Works, Oswego, N. Y.

Latta—Martin Pump Co., Hickory, N. C.  
Luitwieller Pumping Engine Co., Rochester, N. Y.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.

♦ Marsh—American Steam Pump Co., Battle Creek, Mich.

Midland Brass Works, Inc., The, Fort Worth, Texas.  
Midwest Engine Co., Indianapolis, Ind.  
Monitor—Humphreys Mfg. Co., Mansfield, O.  
Multnomah—Multnomah Iron Works, Portland, Ore.  
Myers, F. E., & Bros., Ashland, O.  
National Steam Pump Co., Upper Sandusky, Ohio.  
Novo—Novo Engine Co., Lansing, Mich.  
Park Mfg. Co., The, Charlotte, N. C.  
Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.

Pittsburgh Model Engine Co., Pittsburgh, Pa.  
Pomona—United Iron Works, Kansas City, Mo.  
Price Pump & Engine Co., G. W., San Francisco, Cal.  
Rhea—Buzz Engineering Co., Louisville, Ky.  
Red Jacket Mfg. Co., Davenport, Ia.  
Roturbo—Manistee Iron Works Co., Manistee, Mich.  
Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
Schramm—Chris D. Schramm and Son, Inc., Philadelphia, Pa.

Smith-Valle—The Platt Iron Works Co., Dayton, O.  
Standard Pump & Engine Co., The, Akron, O.  
Stevens—Stevens Mfg. & Supply Co., Chicago, Ill.  
Texas—Axtell Company, Ft. Worth, Tex.  
Texas Mfg. Co., Fort Worth, Tex.  
Trahern Pump Div. Geo. D. Roper Corp., Rockford, Ill.  
20th Century—Harris Air Pump Co., Indianapolis, Ind.  
Union Steam Pump Co., Battle Creek, Mich.  
U. S. Wind Engine & Pump Co., Batavia, Ill.  
V. & K.—Vaile & Kimes, Dayton, O.  
Vogt Brothers Mfg. Co., Louisville, Ky.  
Warlo—Ward-Love Pump Corp., Rockford, Ill.  
Wayne—Fort Wayne Foundry & Machine Co., Fort Wayne, Ind.

Weber Subterranean—Weber Subterranean Pump Co., New York, N. Y.

Weinman Machine Works, Columbus, O.  
Worthington Pump & Machinery Corp., New York.

### PUMPS, ASPHALT.

H. & B.—Hetherington & Berner, Indianapolis, Ind.  
Kinney—Kinney Mfg. Co., Boston, Mass.  
Soo—Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
Warren Bros. Co., Boston, Mass.

### PUMPS, AUTOMOBILE TIRE.

♦ American Marsh—American Steam Pump Co., Battle Creek, Mich.  
B. N. Tapco—Burgess-Norton Mfg. Co., Geneva, Ill.  
Baker Rotary—Baker-Hansen Mfg. Co., Oakland, Calif.  
Bridgeport Brass Co., New York, N. Y.  
Crane—Bay State Pump Co., South Boston, Mass.  
♦ Deming Co., The, Salem, Ohio.  
Fulco—Fulco Pump Co., Blanchester, O.  
Gardner Governor Co., Quincy, Ill.  
Hartford Machine Screw Co., Hartford, Conn.  
Ingersoll-Rand Co., New York, N. Y.



Kellogg Mfg. Co., Rochester, N. Y.  
 Longstroke—Motor Starter & Air Pump Co., New-  
 ark, N. J.  
 Master—Hartford Machine Screw Co., Hartford, Conn.  
 Mayo Mfg. Co., The, Chicago, Ill.  
 Morgan—Morgan Mfg. Co., Inc., Keene, N. H.  
 New Lightning—Goulds Mfg. Co., The, Seneca Falls,  
 N. Y.

- ◆ Noera Mfg. Co., The, Waterbury, Conn.
- Perko—Perkins Marine Lamp Co., Brooklyn, N. Y.
- Pratt—Wm. E. Pratt Mfg. Co., Chicago, Ill.
- Pro-mo-tor Fabricating Corp., New York, N. Y.
- Rose—Frank Rose Mfg. Co., Hastings, Neb.
- Springfield—Shawver Co., Springfield, Ohio.
- Ten Eyck—Ten Eyck Pump Co., Auburn, N. Y.
- Tirrill—Tirrill Gas Machine Lighting Co., New York.
- Turner Brass Works, The, Sycamore, Ill.
- ◆ Union Steam Pump Co., Battle Creek, Mich.
- Wagner Steam Pump Works, Canton, Ohio.
- Yankee—A. F. S. Machine Co., Toledo, O.

#### PUMPS, BARREL.

Boe Automatic—H. M. Boe Company, Minneapolis,  
 Minn.  
 Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Groetken Pump Co., The, Aurora, Ill.  
 McDonald, A. Y., Mfg. Co., Dubuque, Ia.  
 Monarch Mfg. Co., Council Bluffs, Iowa.  
 Republic Steel Package Co., Cleveland, O.  
 Sexton Can Co., Boston, Mass.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Wilson & Bennett Mfg. Co., Chicago, Ill.

#### PUMPS, BASIN OR LAVATORY.

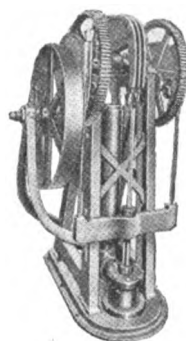
Curtiss, J. H. Co., New York.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Sands, A. B., & Son Co., New York, N. Y.  
 Wolf Mfg. Co., Chicago, Ill.

#### PUMPS, BILGE AND SEWAGE.

- Abendroth & Root Mfg. Co., Newburgh, N. Y.
- Advance Pump & Compressor Co., Battle Creek, Mich.
- Ajax—W. & B. Douglas, Middletown, Conn.
- Aldrich—Aldrich Pump Co., Allentown, Pa.
- American—The American Well Works, Aurora, Ill.
- Barnes Mfg. Co., The, Mansfield, O.
- Berger Bros. Co., Philadelphia, Pa.
- Blackmer Maid—Blackmer Rotary Pump, Power &  
 Mfg. Co., Petoskey, Mich.
- Blakeslee—Blakeslee Mfg. Co., DuQuoin, Ill.
- Bruce & Cook, New York, N. Y.
- Chicago Pump Company, The, Chicago, Ill.
- C. H. & E. Manufacturing Co., Inc., Milwaukee (porta-  
 ble power).
- Davidson, M. T., Co., New York, N. Y.
- Deming Co., The, Salem, O.
- Diemer, Geo. W., Mfg. Co., Chicago, Ill.
- Economy—Economy Pumping Machinery Co., Chicago,  
 Ill.
- Haydenville Co., The, Haydenville, Mass.
- Edson Mfg. Co., Boston, Mass.
- Erie Pump & Equipment Co., Erie, Pa.
- Erwin—Erwin & Co., Chicago, Ill.
- Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Humphreys Mfg. Co., The, Mansfield, O.
- Jenkins Mfg. Co., New York, N. Y.
- Latta-Martin Pump Co., Hickory, N. C.
- Laughlin, Thomas, Co., Portland, Me.
- Lawrence Pump & Engine Co., Lawrence, Mass.
- ◆ McGowan—John H. McGowan Co., The, Cincinnati,  
 Ohio.
- McKnight Patent—Tranter Mfg. Co., Pittsburgh, Pa.
- Manistee Iron Works Co., Manistee, Mich.
- Marsh—American Steam Pump Co., Battle Creek,  
 Mich.
- Morris Machine Works, Baldwinville, N. Y.
- ◆ Myers' Low Down—F. E. Myers & Bro., Ashland, O.
- National Foundry & Machine Co., Louisville, Ky.
- National Marine Lamp Co., New York.
- Oil Well Supply Co., Pittsburg, Pa.
- Pulling—Columbus Steam Pump Works Co., Colum-  
 bus, O.
- Roturbo—Manistee Iron Works Co., Manistee, Mich.
- Rumsey's Eagle—Rumsey Pump Co., Ltd., Seneca  
 Falls, N. Y.
- Sands & Son Co., A. B., New York, N. Y.
- Smith-Valle—The Platt Iron Works Co., Dayton, O.
- Superheater Co., The, New York, N. Y.
- Swaby Mfg. Co., Chicago, Ill.
- Torrent—W. & B. Douglas, Middletown, Conn.
- Twinvolute—Twinvolute Pump & Mfg. Co., Newark,  
 N. J.
- ◆ Union Steam Pump Co., Battle Creek, Mich.
- Vanduzen Co., The E. W., Cincinnati, O.
- Vogt Brothers Mfg. Co., Louisville, Ky.
- Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.
- Wagner Steam Pump Works, Canton, Ohio.
- Weinman Pump Mfg. Co., Columbus, O.
- Wilcox, Crittenden & Co., Middletown, Conn.
- Worthington Pump & Machinery Corp., New York.
- Yeomans Bros. Co., Chicago, Ill.

#### PUMPS, SOILER FEED.

Advance Pump & Compressor Co., Battle Creek, Mich.



## BOICOURT Double Stroke Deep Well Pumps

For use in Deepest Wells.  
 Give Highest Efficiency  
 Silent in Action.

### "MIDLAND" Pump cylinders

The Standard for 20 years.  
 Write for Bulletins

**THE MIDLAND BRASS WORKS**  
 Manufacturers  
 Forth, Worth Texas

Alberger—Alberger Pump & Condenser Co., New  
 York.

Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Allentown Rolling Mills, Allentown, Pa.

Allis-Chalmers Co., Milwaukee, Wis.

- ◆ American Marsh—American Steam Pump Co., Battle  
 Creek, Mich.

American—The American Well Works, Aurora, Ill.  
 Blackmer Rotary Pump Power & Mfg. Co., Petoskey,  
 Blake—Blake Pump & Condenser Co., Fitchburg, Mass.

Blakeslee—Blakeslee Mfg. Co., DuQuoin, Ill.

Boyle, Porter & Co., Connellsville, Pa.

Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.

Bull Dog—Lucey Mfg. Corp., New York, N. Y.

Cameron—A. S. Cameron Steam Pump Works, New  
 York, N. Y.

Canton, Hughes—Chalmers Pump & Mfg. Co., Lima,  
 Ohio.

Chicago Pump Co., Chicago, Ill.

Columbus Steam Pump Works Co., The, Columbus, O.

Connellsville Machine & Car Co., Connellsville, Pa.

Coppus—Coppus Engineering & Equipment Co.,  
 Worcester, Mass.

Darling Pump & Mfg. Co., Ltd., The, Williamsport,  
 Pa.

"Davidson"—Davidson, M. T., Co., New York, N. Y.

Dayton-Dowd Co., Quincy, Ill.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

- ◆ Deming Co., The, Salem, Ohio.

Douglas, W. & B., Middletown, Conn.

- ◆ Du Bois—Du Bois Iron Works, Du Bois, Pa.

Durite—Lucas-Miner Tool & Production Co., Day-  
 ton, Ohio.

Fairbanks, Morse & Co., Chicago, Ill.

Farnsworth Co., Conshohocken, Pa.

Foster Pump Works, Brooklyn, N. Y.

Fritz's Beam Doctor—Geo. J. Fritz Foundry & Machine  
 Co., St. Louis, Mo.

- ◆ Gardner—The Gardner Governor Co., Quincy, Ill.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.

Jamieson, M. W., & Co., Warren, Pa.

Jennings Hytor—Nash Engineering Co., So. Norwalk,  
 Conn.

Lea High Duty—Lea Equipment Co., Philadelphia, Pa.

Lea-Courtney Co., Newark, N. J.

Luitweller Pumping Engine Co., Rochester, N. Y.

Manistee Iron Works Co., Manistee, Mich.

- ◆ McGowan—John H. McGowan Co., The, Cincinnati,  
 Ohio.

◆ Marsh—American Steam Pump Co., Battle Creek,  
 Mich.

Midwest Engine Co., Indianapolis, Ind.

Miller's—Charles E. Miller, Anderson, Ind.

Morris Machine Works, Baldwinville, N. Y.

◆ Myers—F. E. Myers & Bro., Ashland, O.

National Steam Pump Co., Upper Sandusky, Ohio.

Oil Well Supply Co., Pittsburg, Pa.

Park Mfg. Co., The, Charlotte, N. C.

Pittsburgh Valve Foundry & Construction Co., Pitts-  
 burgh, Pa.

Platt Iron Works, Dayton, Ohio.

Roturbo—Manistee Iron Works Co., Manistee, Mich.

Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

- ◆ Sherwood Mfg. Co., Buffalo, N. Y.

Silent—Centrifugal Pump Co., New York, N. Y.

Smith-Valle—The Platt Iron Works Co., Dayton, O.

Terry—Terry Steam Turbine Co., Hartford, Conn.

Twinvolute Pump & Mfg. Co., Newark, N. J.

Union Steam Pump Co., Battle Creek, Mich.

Vogt Bros. Mfg. Co., Louisville, Ky.

Wagner—Wagner Steam Pump Works, Canton, O.

Warren Steam Pump Co., Warren, Mass.

Weinman Pump Mfg. Co., The, Columbus, O.

Weir & Craig Mfg. Co., Chicago, Ill.

Wilson-Snyder Mfg. Co., Pittsburg, Pa.

Worthington Pump & Machinery Corp., New York.

Wright-Austin Co., Detroit, Mich.

Young Pump Co., Michigan City, Ind.

**PUMPS, BOILER TEST.**

- Crosby Steam Gage & Valve Co., Boston, Mass.  
 Dake Engine Co., Grand Haven, Mich. (hand).  
 ♦ Deming Co., The, Salem, Ohio.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Henderer's Sons, A. L., Wilmington, Del.  
 Hills-McCanna Co., Chicago, Ill.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Marine Iron Works, Chicago, Ill.  
 Nathan Mfg. Co., New York, N. Y.  
 Osborne High Pressure Joint & Valve Co., Chicago, Ill.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Scully—Scully Steel & Iron Co., Chicago, Ill.  
 Shaw's—Quimby Engineering Co., Philadelphia, Pa.  
 Star—Star Brass Mfg. Co., Boston, Mass.

**PUMPS, BRINE.**

(See also "Pump, Steam.")

- Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Alert, Bestyett, Famous—Lucas-Miner Pump Co., Chicago, Ill.  
 ♦ American, Marsh—American Steam Pump Co., Battle Creek, Mich.  
 American—The American Well Works, Aurora, Ill.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Chicago Pump Co., Chicago, Ill. . .  
 ♦ Deming Co., The, Salem, Ohio.  
 Economy Pumping Machinery Co., Chicago, Ill.  
 Famous—Lucas-Miner Tool & Production Co., Dayton, Ohio.  
 Foster Pump Works, Brooklyn, N. Y.  
 Gardner Governor Co., Quincy, Ill.  
 Goulds Mfg. Co., Seneca Falls, N. Y.  
 Midwest Engine Co., Indianapolis, Ind.  
 Morris Machine Works, Baldwin, N. Y.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Soo—Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Twinvolute—Twinvolute Pump & Mfg. Co., Newark, N. J.  
 Union—Union Steam Pump Co., Battle Creek, Mich.  
 Wagoner Steam Pump Works, Canton, Ohio.  
 Worthington Pump & Machinery Corp., New York.

**PUMPS, CENTRIFUGAL AND TURBINE.**

(See also "Pumps, Rotary.")

- Acme—Acme Ventilator Corp., Boston, Mass.  
 Advance—Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aerothrust Engine Co., La Porte, Ind.  
 Alberger—Alberger Pump & Condenser Co., New York.  
 Allenclyff Engineering Co., Columbus, O.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 ♦ American, Marsh—American Steam Pump Co., Battle Creek, Mich.  
 American—The American Well Works, Aurora, Ill.  
 Bagley & Sewall Co., The, Watertown, N. Y.  
 Barber—King Brothers, Syracuse, N. Y. (with gas engine).  
 Beach-Russ Co., New York, N. Y.  
 Bean—Bean Spray Pump Co., San Jose, Cal.  
 Black-Clawson Co., Hamilton, O.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Butters—Meese & Gottfried Co., San Francisco, Cal.  
 C. H. & E. Manufacturing Co., Inc., Milwaukee, Wis.  
 Camden Iron Works, Camden, N. J.  
 Cameron—A. S. Cameron Steam Pump Works, New  
 Cameron—Ingersoll-Rand Co., New York, N. Y.  
 Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
 Cataract—Joseph Edwards & Co., New York, N. Y.  
 Chicago—Plant Eng. & Equipment Co., New York, N. Y.  
 Chicago Well Supply Co., Chicago, Ill.  
 Columbus Steam Pump Works Co., The, Columbus, O. Mich.  
 Commercial Engine Co., Los Angeles, Cal.  
 The Chicago—Chicago Pump Co., Chicago, Ill.  
 Dake—Dake Engine Co., Grand Haven, Mich.  
 Dayton-Dowd Co., Quincy, Ill.  
 Dayton—Union Engineering Co., Cleveland, O.  
 DeLaval—DeLaval Steam Turbine Co., Trenton, N. J.  
 ♦ Deming Co., The, Salem, Ohio.  
 Doble Co., Abner, San Francisco, Cal.  
 D'Olier Centrifugal Pump & Machine Co., Philadelphia, Pa.  
 Domestic Engine & Pump Co., Shippenburg, Pa.  
 Douglas, W. B., Middletown, Conn.  
 Downie—Keystone Driller Co., Beaver Falls, Pa.  
 Duriron (acid proof)—The Duriron Co., Inc., Dayton, Ohio.  
 Earle—Earle Gear & Machine Co., Philadelphia, Pa.  
 Eclipse—Union Iron Works, Oakland, Cal.  
 Economy—Economy Pumping, Machinery Co., Chicago, Ill.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 Erwin—Erwin & Co., Chicago, Ill.  
 Evinsrud Motor Co., Milwaukee, Wis.

- ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Farrar Pump & Machinery Co., St. Louis, Mo.  
 Frederick—Frederick Iron & Steel Co., Frederick, Md.  
 Fulton—Fulton Machine & Vise Co., Lowville, N. Y.  
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hayton—Dayton-Dowd Co., Quincy, Ill.  
 Hooker Steam Pump Works, St. Louis, Mo.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Jackson—Byron Jackson Iron Works, San Francisco, Cal.  
 Johnson, Peter, & Sons, Inc., Decorah, Iowa.  
 Kerr Vortex—Kerr Machinery Corp., Detroit, Mich.  
 Kingsford Foundry & Machine Works, Oswego, N. Y.  
 Kiser—Dayton Engine Works, Dayton.  
 Krogh Pump & Machinery Co., San Francisco, Cal.  
 Lane & Bowler Co., Memphis, Tenn.  
 Lawrence Pump—The Lawrence Machine Co., Lawrence, Mass.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Lea-Courtenay Co., Newark, N. J.  
 Liberty—Humphreys Mfg. Co., The, Mansfield, O.  
 Lloyd, A., Erie, Pa.  
 Lucey Mfg. Corp., New York, N. Y.  
 May-Nelson Mfg. Co., Washington, D. C.  
 Midwest Engine Co., Indianapolis, Ind.  
 Mills Machine Co., Lawrence, Mass.  
 Mogul—Southern Well Works Co., Chattanooga, Tenn.  
 Moore Steam Turbine Corp., Wellsville, N. Y.  
 Morris Co., I. P., Philadelphia, Pa.  
 Morris Machine Works, Baldwinville, N. Y.  
 Novo—Novo Engine Co., Lansing, Mich.  
 Pelton—Pelton Water-Wheel Co., San Francisco, Cal.  
 Pennsylvania Pump & Compressor Co., Easton, Pa.  
 Platt—The Platt Iron Works Co., Dayton, O.  
 Power Turbo Blower Co., New York, N. Y.  
 Price Pump & Engine Co., G. W., San Francisco, Cal.  
 Rider-Ericsson Engine Co., New York. (Single and multi-stage.)  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Samsco—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Scranton—Scranton Pump Co., Scranton, Pa.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Smith-Valle—The Platt Iron Works, Dayton, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Star—Star Pump Co., Boston, Mass.  
 Steam Motors Co., The, Springfield, Mass.  
 Stine, S. B., Osceola Mills, Pa. (for mines).  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Swaby Mfg. Co., Chicago, Ill.  
 Swett, A. L., Iron Works, Medina, N. Y.  
 Taber Pump Co., Buffalo, N. Y.  
 Terry Steam Turbine Co., The, Hartford, Conn.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Twinvolute—Twinvolute Pump & Mfg. Co., Newark, N. J.  
 Union—Union Steam Pump Co., Battle Creek, Mich.  
 Valley Iron Works, Appleton, Wis.  
 Van Wie—East Iron & Machine Co., The, Lima, Ohio.  
 Viking Universal—Viking Pump Co., New York, N. Y.  
 Webb City & Carterville Foundry & Machine Works, Webb City, Mo.  
 Weinman Pump Mfg. Co., Columbus, O.  
 Weimann—Plant Engineering & Equipment Co., New York, N. Y.  
 Westinghouse—Westinghouse Machine Co., East Pittsburgh, Pa.  
 Wheeler—The Wheeler Condenser & Engineering Co., New York, N. Y.  
 Wilson-Snyder Centrifugal Pump Co., Pittsburgh, Pa.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Worthington Pump & Machinery Corp., New York, N. Y.  
 Yeomans Bros. Co., Chicago, Ill.  
 Young Pump Co., Michigan City, Ind.  
 Yuba—Yuba Mfg. Co., Maryville, Cal.  
 Zin-Ho—H. B. Compressor & Pump Co., Chicago, Ill.

**PUMPS, CHAIN.**

- Aerating—Enterprise Windmill Co., Sandwich, Ill.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Boss—Biggs Pump & Supply Co., La Fayette, Ind.  
 Bushnell—Bushnell Pump Co., Bushnell, Ill.  
 Cedar Rapids—Cedar Rapids Pump Co., Cedar Rapids, Iowa.  
 Comet—H. B. Rusler Mfg. Co., Johnston, O. (Bucket).  
 Crescent—Cahill-Swift Mfg. Co., St. Louis, Mo.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Florence Pump & Lumber Co., Memphis, Tenn.  
 Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 Temple—The Temple Pump Co., Chicago, Ill.  
 Wyckoff & Sox Co., A., Elmira, N. Y.

**PUMPS, CISTERN AND SINK.**

- American Scale Co., Kansas City, Mo.  
 Aurora—Divekey Bros. Mfg. Co., Aurora, Ill.  
 Barnes Mfg. Co., The, Mansfield, O.  
 ♦ Blue Special—The Deming Co., Salem, Ohio.

Buckeye—Mast, Foos & Co., Springfield, O.  
 Davis-Hansen Pump Co., Oshkosh, Wis.  
 Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.  
 Divekey Bros. Mfg. Co., Aurora, Ill.  
 Dix—Dickson Co., The, Peoria, Ill.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 F. & S. Ideal—The Field & Shorb Co., Decatur, Ill.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hartley, C. J., Co., Peoria, Ill.  
 Hayes—Hayes Pump & Planter Co., Galva, Ill.  
 Hazen Mfg. Co., Hudson, Mich.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Kerrihard Co., The, Red Oak, Ia.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 Peters—Peters Pump Co., Kewanee, Ill.  
 Pittsburgh Pump & Supply Co., Pittsburgh, Pa.  
 Puritan—The Barnes Mfg. Co., Mansfield, O.  
 Red Jacket Mfg. Co., Davenport, Ia.  
 Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Sanitary Pump Co., The, Dayton, O.  
 Trahern Pump Div. Geo. D. Roper Corp., The, Rockford, Ill.  
 Union Iron Works, The, Selma, Ala.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

#### PUMPS, CONDENSATION, AUTOMATIC ELECTRIC.

♦ American Marsh—American Steam Pump Co., Battle Creek, Mich.  
 The Chicago—Chicago Pump Co., The, Chicago, Ill.  
 Erwin & Co., Chicago, Ill.  
 Gardner Governor Co., Quincy, Ill.  
 Rider-Ericsson Engine Co., New York. (and receiver).  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Silent—Centrifugal Pump Co., New York, N. Y.  
 Union—Union Steam Pump Co., Battle Creek, Mich.  
 Trane—The Trane Co., La Crosse, Wis.  
 Worthington Pump & Machinery Corp., New York, N. Y.  
 Wright-Austin—Wright-Austin Co., Detroit, Mich.  
 Yeomans Bros. Co., Chicago, Ill.

#### PUMPS, CONTRACTORS (DIAPHRAGM).

Acme—W. & B. Douglas, Middletown, Conn.  
 Advance—Advance Pump & Compressor Co., Battle Creek, Mich.  
 Ajax—Barnes Mfg. Co., Mansfield, O.  
 Atlantic—Harold L. Bond Co., Boston, Mass.  
 Canton-Hughes—Chalmers Pump & Mfg. Co., Lima, Ohio.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Boss—American Cement Machine Co., Keokuk, Iowa.  
 C. H. & E.—C. H. & E. Manufacturing Co., Inc., Milwaukee, Wis.  
 Carlin Machine Co., John H. Pittsburg, Pa. (gas engine driven).  
 Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
 Chicago Well Supply Co., Chicago, Ill.  
 Colonial, Handy—The Barnes Mfg. Co., Mansfield, Ohio.  
 Columbus Steam Pump Works Co., The, Columbus, O.  
 ♦ Deming Co., The, Salem, Ohio.  
 Diamond—Diamond Rubber Co., Inc., Akron, O.  
 Domestic Engine & Pump Co., Shippensburg, Pa.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Eclipse—Union Iron Works, Oakland, Cal.  
 Edson—Edson Mfg. Co., Boston, Mass.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 Evinrude—Evinrude Motor Co., Milwaukee, Wis.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Koehring Co., Milwaukee, Wis.  
 Laughlin, Thos., Co., The, Portland, Me.  
 Liberty—Humphreys Mfg. Co., The, Mansfield, O.  
 Marine Mfg. & Supply Co., New York.  
 Midwest Engine Co., Indianapolis, Ind.  
 Morris Machine Works, Baldwinville, N. Y.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 Nelson Bros. Co., Saginaw, Mich.  
 Novo—Novo Engine Co., Lansing, Mich.  
 Parker, A. A., Watford, N. Y.  
 Parks Engineering Co., Philadelphia, Pa.  
 Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Star—Boston & Lockport Block Co., Boston, Mass.  
 Sultan—Whitman Agricultural Co., St. Louis, Mo.  
 Van Wie—East Iron & Machine Co., Lima, Ohio.  
 Wonder—Construction Machinery Co., Waterloo, Ia.  
 Worthington Pump & Machinery Corp., New York,

#### PUMPS, DREDGING.

Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 American Well Works, Aurora, Ill.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Columbus Steam Pump Works Co., The, Columbus, O.  
 Erie—Erie Pump & Engine Co., Medina, N. Y.  
 Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 Jackson—Byron Jackson Iron Works, San Francisco.

Kingsford Foundry & Machine Works, Oswego, N. Y.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Midwest Engine Co., Indianapolis, Ind.  
 Morris Machine Works, Baldwinville, N. Y.  
 Swaby Mfg. Co., Chicago, Ill.  
 Van Wie—East Iron & Machine Co., Lima, Ohio.  
 Worthington Pump & Machinery Corp., New York,

#### PUMPS, DRY DOCK.

Midwest Engine Co., Indianapolis, Ind.

#### PUMPS, DRY VACUUM.

Alberger—Alberger Pump & Condenser Co., New York, N. Y.  
 ♦ American Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 Chicago Pump Co., Chicago, Ill.  
 Connorsville Blower Co., Connorsville, Ind.  
 Davidson, M. T., Co., New York, N. Y.  
 Economy—Thomas & Smith, Inc., Chicago, Ill.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Imperial, Ingersoll-Rand—Ingersoll-Rand Co., New York, N. Y.  
 ♦ Sullivan Machinery Co., Chicago, Ill.  
 Tokheim—Tokheim Mfg. Co., Inc., The, Cedar Rapids, Iowa.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Worthington Pump & Machinery Corp., New York,

#### PUMPS, ELEVATOR.

(See also "Pumps, Hydraulic.")

Aldrich—Aldrich Pump Co., Allentown, Pa.  
 ♦ American—American Steam Pump Co., Battle Creek, Mich.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Chicago Pump Co., Chicago, Ill.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 ♦ McGowan—John H. McGowan & Co., The, Cincinnati, Ohio.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Twinvolute—Twinvolute Pump & Mfg. Co., Newark, N. J.  
 Wagener Steam Pump Works, Canton, Ohio.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, FILLING STATION.

(See also "Pumps, Measuring.")

Milwaukee Tank Works, Inc., Milwaukee, Wis.

#### PUMPS, FILTER PRESS.

(See "Pumps, Steam.")

#### PUMPS, FIRE, UNDERWRITERS.

(See "Pumps, Steam.")

Dayton-Dowd Co., Quincy, Ill.  
 Earle—The Earle Gear & Machine Co., Philadelphia, Pa.  
 Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 Lea-Courtney Co., Newark, N. J.  
 Pirsch, Peter, & Sons Co., Kenosha, Wis.  
 Weinman—The Weinman Pump Mfg. Co., Columbus, O.  
 Worthington Pump & Machinery Corp., New York,

#### PUMPS, FLY-WHEEL.

Guild & Garrison, Brooklyn, N. Y.  
 Midwest Engine Co., Indianapolis, Ind.  
 Transit—National Transit Pump & Machine Co., Oil City, Pa.  
 Worthington Pump & Machinery Corp., New York,

#### PUMPS, FORCE AND LIFT, HAND AND WINDMILL.

♦ Acme—The Deming Co., Salem, Ohio.  
 Aermotor Co., Chicago, Ill.  
 Always Primed—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Anti-freezing—Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 Ashland—F. E. Myers & Bro., Ashland, O.  
 Athol Pump Co., Athol, Mass.  
 ♦ Atlas—The Deming Co., Salem, O.  
 Banner—Barnes Mfg. Co., The, Mansfield, O.  
 ♦ Banner—The Deming Co., Salem, O.  
 Big Giant—J. E. Kennedy, New York.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Blackmer Rotary Pump Power & Mfg. Co., Petoskey, Mich.  
 Blue Ball Machine Works, Blue Ball, Pa.  
 ♦ Blue Special—The Deming Co., Salem, O.  
 Blue Star—Wistrand Mfg. Co., Galva, Ill.  
 Boekel & Co., Wm., Philadelphia, Pa.  
 Boss—American Cement Machine Co., Keokuk, Iowa.  
 Buckeye—Mast, Foos & Co., Springfield, O.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Bulldozer—F. E. Myers & Bro., Ashland, O.  
 Butler—Butler Co., The, Butler, Ind.  
 Bushnell—Bushnell Pump Co., Bushnell, Ill.  
 Capitol—The Barnes Mfg. Co., Mansfield, O.  
 Challenge—Challenge Co., Batavia, Ill.

- Chicago Well Supply Co., Chicago, Ill.
- ◆ Climax—The Deming Co., Salem, O.
- ◆ Cog Gear—F. E. Myers & Bro., Ashland, O.
- ◆ Cogswell—The Deming Co., Salem, O.
- ◆ Colonial—The Barnes Mfg. Co., Mansfield, O.
- ◆ Columbia—The Deming Co., Salem, O.
- ◆ Comet—H. B. Busler, Johnstown, O.
- ◆ Cook, A. D., Lawrenceburg, Ind.
- ◆ Corcoran—A. J. Corcoran, Inc., Jersey City, N. J.
- ◆ Crescent—Cahill-Swift Mfg. Co., St. Louis, Mo.
- ◆ Crestline Mfg. Co., Crestline, O. Trade names—Classic, Gold Bond, Hector, Little King, Reliance Pilot, Sunshine.
- ◆ Decatur Pump & Mfg. Co., Decatur, Ill.
- ◆ Deming—The Deming Co., Salem, O.
- ◆ Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.
- ◆ Dixie—The Barnes Mfg. Co., Mansfield, O.
- ◆ Domestic—The Deming Co., Salem, O.
- ◆ Doran—Doran Mfg. Co., Chicago, Ill.
- ◆ Douglas—W. & B. Douglas, Middletown, Conn.
- ◆ Duplex Mfg. Co., Superior, Wis.
- ◆ Eclipse—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Economic—W. & B. Douglas, Middletown, Conn.
- ◆ Economy—Indiana Air Pump Co., Indianapolis, Ind.
- ◆ Etter—Domestic Engine & Pump Co., Shippenberg, Pa.
- ◆ Fairbanks—Fairbanks, Morse & Co., Chicago.
- ◆ Farmer's Favorite—The Deming Co., Salem, O.
- ◆ Fast Mail—Flint & Walling Mfg. Co., Kendallville, Ind.
- ◆ Femco—Fairbanks, Morse & Co., Chicago, Ill.
- ◆ Florida—Rumsey Pump Co., Seneca Falls, N. Y.
- ◆ F. & S.—The Field & Shorb Co., Decatur, Ill.
- ◆ Fuller & Johnson, Madison, Wis.
- ◆ Gardner Governor Co., Quincy, Ill.
- ◆ Giant—The Deming Co., Salem, O.
- ◆ Goulds Mfg. Co. of Illinois, Chicago, Ill.
- ◆ Goulds Mfg. Co., The, Seneca Falls, N. Y. Trade names—Advance, Autowater, Boston, Challenge, Columbia, Combination, Empire, New Alert, Pacific, Pyramid, New Lightning, Thresher, Universe, Vim.
- ◆ Gusher—F. E. Myers & Bro., Ashland, O.
- ◆ Handy Billy—The Humphries Mfg. Co., Mansfield, Ohio.
- ◆ Handy—The Barnes Mfg. Co., Mansfield, O.
- ◆ Hannegan—Western Pump & Machinery Co., St. Paul, Minn.
- ◆ Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.
- ◆ Hayes—Hayes Pump & Planter Co., Galva, Ill.
- ◆ Hazen Mfg. Co., Hudson, Mich.
- ◆ Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.
- ◆ Hunt—Rodney Hunt Machine Co., Orange, Mass.
- ◆ Hydraeram—The Deming Co., Salem, O.
- ◆ Hydraulic Press Mfg. Co., Mount Gilead, O.
- ◆ Ideal—The Deming Co., Salem, O.
- ◆ Imperial—The Barnes Mfg. Co., Mansfield, O.
- ◆ Imperial—F. E. Myers & Bro., Ashland, O.
- ◆ Improved Top Notch—Pittsburgh Pump Co., Pittsburgh.
- ◆ Ingersoll-Rand Co., New York, N. Y.
- ◆ Jupiter—The Barnes Mfg. Co., Mansfield, O.
- ◆ Kerrihard Co., Red Oak, Ia.
- ◆ Kewanee Private Utilities Co., Kewanee, Ill.
- ◆ Kirkup & Co., Robert, Cincinnati, O.
- ◆ Klots Machine Co., Sandusky, O.
- ◆ Lansing—Lansing Motor & Pump Co., Lansing, Mich.
- ◆ Leader—The Deming Co., Salem, O.
- ◆ Leader Iron Works, Decatur, Ill.
- ◆ Liberty—Humphries Mfg. Co., The, Mansfield, O.
- ◆ Little Giant—The Deming Co., Salem, O.
- ◆ Locke—Locke Regulator Co., Salem, Mass.
- ◆ Lucas-Miner Tool & Production Co., The, Dayton, O.
- ◆ Luitweiler Pumping Engine Co., Rochester, N. Y.
- ◆ Marine, Mascot—The Deming Co., Salem, O.
- ◆ McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ Myers, F. E., & Bro., Ashland, O. Trade Names—Advance, Defiance, Gusher, Hydro-Pneumatic, Regulator, Siphon, Ashland, Bulldozer, Cog Gear, Imperial, New Century, Ratchet Handle, Submerged Cylinder, Tubular Handle.
- ◆ Minnehaha—R. R. Howell & Co., Minneapolis, Minn.
- ◆ Mohican—The Barnes Mfg. Co., Mansfield, O.
- ◆ Moline—Ottumwa Moline Engine & Pump Co., Ottumwa, Iowa.
- ◆ Monarch—Cedar Rapids Pump Co., Cedar Rapids, Ia.
- ◆ Monarch—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.
- ◆ Monitor—Baker Mfg. Co., Evansville, Wis.
- ◆ Myers—Myers Machine Tool Co., Philadelphia, Pa.
- ◆ Nancy Hanks—Cedar Rapids Pump Co., Cedar Rapids, Iowa.
- ◆ Nelson Mfg. & Supply Co., Hutchinson, Kan.
- ◆ New Century—F. E. Myers & Bro., Ashland, O.
- ◆ New Champion—Enterprise Windmill Co., Sandwich, Ill.
- ◆ New Era—The Deming Co., Salem, O.
- ◆ New Fountain—Pittsburgh Pump Co., Pittsburgh, Pa.
- ◆ New Model—The Deming Co., Salem, O.
- ◆ Novelty—The Hess-Snyder Co., Massillon, O.
- ◆ Novo—Novo Engine Co., Lansing, Mich.
- ◆ Ohio Improved—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.
- ◆ Oil Pump & Specialty Co., Chicago, Ill.
- ◆ Oshkosh—Davis-Hansen Pump Co., Oshkosh, Wis.
- ◆ Parlor City—Chandler Pump Co., Cedar Rapids, Ia.
- ◆ Peerless—The Deming Co., Salem, O.

- ◆ Peters'—Peters Pump Co., Kewanee, Ill.
- ◆ Pittsburgh—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.
- ◆ Premium—The Deming Co., Salem, O.
- ◆ Ratchet Handle—F. E. Myers & Bro., Ashland, O.
- ◆ Red Cross—The Red Cross Mfg. Co., Bluffton, Ind.
- ◆ Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.
- ◆ Rex—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.
- ◆ Richland—The Barnes Mfg. Co., Mansfield, O.
- ◆ Rumsey's Acme, Rumsey's Anti-Freezing, Rumsey's Cataract, Rumsey's Excelsior, Rumsey's Maltese Cross, Rumsey's Powerful, Rumsey's Terror—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.
- ◆ Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.
- ◆ Shirk—Blue Ball Machine Works, Blue Ball, Pa.
- ◆ Side Force—W. & B. Douglas, Middletown, Conn.
- ◆ Smith—T. L. Smith Co., The, Milwaukee, Wis.
- ◆ So-Easy-To-Fix—Red Jacket Mfg. Co., Davenport, Southern Star—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Standard Pump & Engine Co., The, Akron, O.
- ◆ Star Pointer Pump Mfg. Co., Menasha, Wis.
- ◆ Star Ratchet—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Stock—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Submerged Cylinder—F. E. Myers & Bro., Ashland, O.
- ◆ Sullivan Machinery Co., Chicago, Ill.
- ◆ Syphon—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill. (house and yard, hand and windmill).
- ◆ Treaty Co., The, Greenville, Ohio.
- ◆ Treko—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.
- ◆ Triumph—The Deming Co., Salem, O.
- ◆ Tubular Well—F. E. Myers & Bro., Ashland, O.
- ◆ Tufnut—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.
- ◆ U. S. Wind Engine & Pump Co., Batavia, Ill.
- ◆ Vim—The Barnes Mfg. Co., Mansfield, O.
- ◆ Warlo—Ward-Love Pump Corp., Rockford, Ill.
- ◆ Woodmanse Mfg. Co., Freeport, Ill.
- ◆ Woodward-Wanger Co., Philadelphia.

#### PUMP SETS, FUEL OIL.

- Gwynn Engineering Co., Pittsburgh, Pa.
- Hammel Oil Burning Equipment Co., Providence, R. I.
- Kinney—Kinney Mfg. Co., Boston, Mass.

#### PUMPS, GAGE TESTING.

- ◆ American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- ◆ Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- ◆ Ashton Valve Co., The, Boston, Mass.
- ◆ Asadian Gauge Mfg. Co., Syracuse, N. Y.
- ◆ Crosby Steam Gauge & Valve Co., Boston, Mass.
- ◆ Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Industrial Instrument Co., Foxboro, Mass.
- ◆ Loneragan—J. E. Loneragan Co., Philadelphia, Pa.
- ◆ Pittsburgh Gauge & Supply Co., Pittsburgh, Pa.
- ◆ Pneumercator Co., Inc., New York, N. Y.
- ◆ Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.
- ◆ United States Gauge Co., New York, N. Y.

#### PUMPS, GARAGE.

(See also "Pumps, Air.")

- ◆ Allen Machine Co., Erie, Pa.
- ◆ American Marsh—American Steam Pump Co., Battle Creek, Mich.
- ◆ American Tank & Pump Co., San Francisco, Cal.
- ◆ Barnes Mfg. Co., Mansfield, O.
- ◆ B. B. Tandem, Minimax—Pro-mo-ter Fabricating Co., New York.
- ◆ Bishop & Babcock Co., The, Cleveland, O.
- ◆ Blackmer Malt—Blackmer Rotary Pump, Power & Mfg. Co., Petokey, Mich.
- ◆ Columbian Steel Tank Co., Kansas City, Mo.
- ◆ Deming—The Deming Co., Salem, O.
- ◆ Divekey Bros. Mfg. Co., Aurora, Ill.
- ◆ Economy—Economy Gas Machine Co., Rochester, N. Y.
- ◆ Gardner Governor Co., The, Quincy, Ill.
- ◆ Gilbert & Barker Mfg. Co., Springfield, Mass.
- ◆ Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Manzel Brothers Co., Buffalo, N. Y.
- ◆ Mayo—Mayo-Skinner Mfg. Co., Chicago, Ill.
- ◆ Milwaukee Tank Works, Milwaukee, Wis.
- ◆ Nagel Corliss Engine Works, Erie, Pa.
- ◆ Reeco Gasoline—Rider-Ericsson Engine Co., New York, N. Y.
- ◆ Sexton Can Co., Boston, Mass.
- ◆ Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.

#### PUMPS, GASFITTERS' PROVING.

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- ◆ Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- ◆ Ashton—Ashton Valve Co., Boston, Mass.
- ◆ Beekman—Beekman Sanitary Specialty Co., New York.
- ◆ Berns, Otto, Newark, N. J.
- ◆ Boebel & Co., Wm., Philadelphia, Pa.
- ◆ Braun Mfg. Co., The David J., Chicago, Ill.
- ◆ Cook, A. D., Lawrenceburg, Ind.
- ◆ Deming—Deming Co., Salem, O.
- ◆ Douglas, W. & B., Middletown, Conn.
- ◆ Feather, N. B., Kearny, N. J.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Industrial Instrument Co., Foxboro, Mass.  
 Johnson Jr. Co., Inc., 11 H. Philadelphia, Pa.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Lucas Pump Co., Dayton, O.  
 Midwest Engine Co., Indianapolis, Ind.  
 National Gauge Co., Brooklyn, N. Y.  
 National Steam Specialty Co., Chicago, Ill.  
 Oil Pump & Specialty Co., Chicago, Ill.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Schaefer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Standard—Star Brass Mfg. Co., Boston, Mass.  
 U. S. Standard—United States Gauge Co., New York.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.

#### PUMPS, GASOLINE AND OIL.

American Oil Pump & Tank Co., Cincinnati, O.  
 American—American Pump & Tank Co., New York.  
 Blackmer Rotary Pump Power Mfg. Co., Petoskey, Mich.  
 Cleveland Steel Barrel Co., Cleveland, O.  
 Dayton Pump & Manufacturing Co., The, Dayton, O.  
 Excelsior—Foster Pump Works, Brooklyn, N. Y.  
 Gardner Governor Co., Chicago, Ill.  
 Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Groetken Pump Co., The, Aurora, Ill.  
 "Guarantee Visible"—Guarantee Liquid Measure Co., Rochester, Pa.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Leader Iron Works, Decatur, Ill.  
 Lieberman Bros., New York, N. Y.  
 Myers—F. E. Myers & Bro., Ashland, Ohio.  
 North American Engine Co., Algona, Iowa.  
 Rider-Ericsson Engine Co., New York, N. Y.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Wayne Oil Tank & Pump Co., Fort Wayne, Ind.  
 Wilson & Bennett Mfg. Co., Chicago, Ill.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, GREASE, LUBRICATING.

Cleveland Steel Barrel Co., Cleveland, O.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Midland—Midland Brass Works, Inc., Ft. Worth, Tex.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 Runyen—Runyens Mfg. Co., Grand Rapids, Mich.

#### PUMPS, HARD RUBBER.

American Hard Rubber Co., New York, N. Y.

#### PUMPS, HIGH SPEED, SPIRAL.

Morris, I. P., Co., Philadelphia, Pa.

#### PUMPS, HOUSE, ELECTRIC AND WATER MOTOR.

Aldrich—Aldrich Pump Co., Allentown, Pa.  
 ♦ American Marsh—American Steam Pump Co., Battle Creek, Mich.  
 American Well Works, The, Aurora, Ill.  
 Athol Pump Co., Athol, Mass.  
 Automatic Bulldozer—F. E. Myers & Bro. Co., Ashland, O.  
 Automatic Rotary Pump Co., New York, N. Y.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Beach-Russ Co., New York, N. Y.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Blackmer—Blackmer Rotary Pump, Power & Mfg. Co., Petoskey, Mich.  
 Booster—Swaby Mfg. Co., Chicago, Ill.  
 Buckeye—Mast, Foos & Co., Springfield, O.  
 Buckeye—The Buckeye Pump & Mfg. Co., Columbus, O.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Caloric—The Bremen Mfg. Co., Bremen, O.  
 Chicago Pump Co., Chicago, Ill.  
 Chicago Well Supply Co., Chicago, Ill.  
 Columbus Pump Supply Co., The, Columbus, O.  
 Combination—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Connersville—Connersville Blower Co., Connersville, Ind.  
 Crestline Mfg. Co., Crestline, Ohio.  
 Cresco—Crescent Mfg. Co., The, Crestline, Ohio.  
 Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
 Dayton-Dowd Co., Quincy, Ill.  
 Decatur Pump & Mfg. Co., Decatur, Ill.  
 Delco Light Company, Dayton, Ohio.  
 Deming—The Deming Co., Salem, O.  
 Dempster Mfg. Co., Des Moines, Ia.  
 Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.  
 Douglas, W. & B., Middletown, Conn.  
 Duro—The Duro Pump & Mfg. Co., Dayton, O.  
 Economy, Indiana—Indiana Air Pump Co., Indianapolis, Ind.  
 Economy Pumping Machinery Co., Chicago, Ill.  
 Erwin & Co., Chicago, Ill.  
 Farrar Pump & Machinery Co., St. Louis, Mo.  
 F. & W.—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Gem—Geo. J. Roberts Co., Dayton, Ohio.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hall—Hall Steam Pump Co., Pittsburgh, Pa.  
 Hayes—Hayes Pump & Planter Co., Galva, Ill.  
 Hasen Mfg. Co., Hudson, Mich.

Hosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Humphreys Mfg. Co., The, Mansfield, O.  
 Improved—W. & B. Douglas, Middletown, Conn.  
 ♦ Index—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Ingersoll-Rand Co., New York, N. Y.  
 Kirkup & Co., Robert, Cincinnati, O.  
 Lawson-Lawton Co., De Pere, Wis.  
 L.L.—Chas. O. Lucas & Co., Dayton, O.  
 Luitwieler Pumping Engine Co., Rochester, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.

Mast, Foos & Co., Springfield, O.  
 Midwest Engine Co., Indianapolis, Ind.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 National Gauge & Equipment Co., La Crosse, Wis.  
 Pendulum—W. & B. Douglas, Middletown, Conn.  
 Perfect—Illinois Pump & Brass Co., Peoria, Ill.  
 Perfected—Latta & Martin Pump Co., Hickory, N. C.  
 Perry—United Pump & Power Co., Chicago, Ill.  
 Peters—Peters Pump Co., Kewanee, Ill.  
 Pneumelectric—Pneumelectric Corp., Syracuse, N. Y.  
 Quimby—Wm. F. Quimby, Inc., New York, N. Y.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Return Air—Ingersoll-Rand Co., New York, N. Y.  
 ♦ Roberts—Geo. J. Roberts Co., Dayton, O.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Scranton Pump Co., Scranton, Pa.  
 Silent Centrifugal Pump Co., New York, N. Y.  
 Simplex—Hawkins Pump Works, Downers Grove, Ill.  
 Standard Pump & Engine Co., Akron, Ohio.  
 Southern Star—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Star—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Stifel, George, Co., Chicago, Ill.  
 Syphon—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Trahern Pump Co., Div., Geo. D. Roper Corp., Rockford, Ill.  
 Triune—The Vac Liquid Equipment Co., Cedar Rapids, Iowa.  
 Twinvolute—Twinvolute Pump & Mfg. Co., Newark, N. J.  
 Triumph—Ohio Pump & Brass Co., Columbus, O.  
 Universal—Latta-Martin Pump Co., Hickory, N. C.  
 Vanduzen Co., The E. W., Cincinnati, O.  
 Van Wie—East Iron & Machine Co., The, Lima, Ohio.  
 V. & K.—The Vaile & Kimes Co., Dayton, O.  
 Weinman—Weinman Pump Mfg. Co., Columbus, O.  
 Wolffs—Wolf Mfg. Co., Chicago, Ill.  
 Yeomans—Yeomans Bros., Co., Chicago, Ill.

#### PUMPS, HYDRAULIC.

Acme Hydraulic Co., Milwaukee, Wis.  
 Advance—Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Bancroft & Barnard, Gardner, Mass.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Blake Pump & Condenser Co., Fitchburg, Mass.  
 Boyls, Porter & Co., Connellsville, Pa.  
 Buckeye—Buckeye Iron & Brass Works, Dayton, Ohio.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron—A. S. Cameron Steam Pump Works, New Carbonate Machine Co., The, Carbondale, Pa.  
 Channon—The Cleveland Faucet Co., Cleveland, O.  
 "Davidson"—Davidson, M. T., Co., New York, N. Y.  
 Dayton-Dowd Co., Quincy, Ill.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 ♦ Deming—The Deming Co., Salem, O.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 French Oil Mill Machinery Co., Piqua, O.  
 Galland-Henning Mfg. Co., Milwaukee, Wis.  
 Garrett, W. D., & Co., New York.  
 General Electric Co., Schenectady, N. Y.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Hydraulic Press Co., The, Mt. Gilead, O.  
 Johnson Belting Co., New York, N. Y.  
 Kingsford Foundry & Machine Works, Oswego, N. Y.  
 Krogh—Krogh Pump & Machinery Co., San Francisco, Cal.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Logeman Bros. Co., Milwaukee, Wis.  
 Lourie—Lourie Mfg. Co., Springfield, Ill.  
 Luitwieler—Luitwieler Pumping Engine Co., Rochester, N. Y.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Midwest Engine Co., Indianapolis, Ind.  
 Morris Machine Works, Baldwinville, N. Y.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 Nashua Steam Press & Boiler Works, Nashua, N. H.  
 Perfect—National Steam Pump Co., Upper Sandusky, Ohio.  
 Perfect—Erwin & Co., Chicago, Ill.  
 Perrin, Wm. R., & Co., Chicago, Ill.  
 Platt Iron Works, Dayton, Ohio.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.



Schaeffer & Budenberg Co., Brooklyn, N. Y.  
 Shaw—Quimby Engineering Co., Philadelphia, Pa.  
 Shriver—T. Shriver & Co., Harrison, N. J.  
 Simplic—Hawkins Pump Works, Downers Grove, Ill.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Spence & Rideout, Nashua, N. H.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Wagener Steam Pump Wks., Canton, Ohio.  
 Watson-Stillman Co., Alden, N. J.  
 Wilson-Snyder Mfg. Co., Pittsburgh, Pa.  
 Wilson-Snyder Centrifugal Pump Co., Pittsburgh, Pa.  
 Wood, William H., Media, Pa.  
 Worthington Pump & Machinery Corp., New York.  
 Yeomans—Yeomans Bros., Chicago, Ill.

#### PUMPS, HYDRAULIC PIPE-TESTING.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 La Vergne Pump Co., Inc., Newark, N. J.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

#### PUMPS, HYDRAULIC VACUUM.

♦ Fenberthy Injector Co., Detroit, Mich.  
 Thompson Mfg. Co., Des Moines, Iowa.

#### PUMPS, HYDRO-PNEUMATIC.

Decatur Pump & Mfg. Co., Decatur, Ill.  
 Economy, Indiana—Indiana Air Pump Co., Indianapolis, Ind.  
 Harris Air Pump Co., Indianapolis, Ind.  
 Humphries Mfg. Co., Mansfield, Ohio.  
 Midwest Engine Co., Indianapolis, Ind.  
 Myers, F. E., & Bro., Ashland, O. Trade Names—  
 Automatic, Electric, Bulldozer, Century, Myers.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.  
 Triune—The Vac Liquid Equipment Co., Cedar Rapids, Ia.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

#### PUMPS, IRRIGATING.

Advance Pump & Compressor Co., Battle Creek, Mich.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 American Well Works, The, Aurora, Ill.  
 ♦ American—American Steam Pump Co., Battle Creek, Mich.  
 Bean—Bean Spray Pump Co., San Jose, Cal.  
 Bolcourt—Midland Brass Works, Inc., Fort Worth, Tex.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 ♦ Columbia—The Deming Co., Salem, O.  
 Connersville—Connersville Blower Co., Connersville, Ind.  
 Cook, A. D., Lawrenceburg, Ind.  
 Dayton-Dowd Co., Quincy, Ill.  
 ♦ Deming Co., The, Salem, O.  
 Dempster Mill Mfg. Co., Beatrice, Neb.  
 D'Olier Centrifugal Pump & Machinery Co., Philadelphia, Pa.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Farrar Pump & Machinery Co., St. Louis, Mo.  
 Gardner Governor Co., Quincy, Ill.  
 Garratt, W. T., San Francisco, Cal.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Layne & Bowler Co., Houston, Tex.  
 Link-Belt Company, Chicago and Philadelphia.  
 Lucas Pump Co., The, Dayton, O.  
 Luitwieler Pumping Engine Co., Rochester, N. Y.  
 McDonald Mfg. Co., Dubuque, Iowa.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Menge—Menge Pump & Machinery Co., Ltd., New Orleans, La.  
 Midwest Engine Co., Indianapolis, Ind.  
 Mogul—Woodmanse Mfg. Co., Freeport, Ill.  
 Morris Machine Works, Baldwinville, N. Y.  
 Myers Bulldozer—F. E. Myers & Bro., Ashland, O.  
 New Deluge—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 ♦ Premium—The Deming Co., Salem, O.  
 Pulling—Columbus Steam Pump Works Co., Columbus, O.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Standard Pump & Engine Co., The, Akron, O.  
 Terry Steam Turbine Co., Hartford, Conn.  
 Tips Foundry & Machine Co., Austin, Texas.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Van Wie—East Iron & Machine Co., Lima, Ohio.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Weinman—Weinman Pump Mfg. Co., Columbus, O.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, JET.

(See also "Pumps, Steam Ejector.")

#### PUMPS, KEROSENE AND GASOLINE.

Edson Mfg. Co., Boston, Mass.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Myers, F. E., & Bro., Ashland, O.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Soo—Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, LUBRICATING AND COOLING, FOR MACHINE USE.

Fulfo—Fulfo Pump Co., The, Blanchester, O.  
 Roco, Roper—Hopdale Mfg. Co., Milford, Mass.  
 Rollway—Michigan Machine Co., Detroit, Mich.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.

#### PUMPS, MAGMA.

Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 Connersville—Connersville Blower Co., Connersville, Ind.  
 Davidson, M. T., Co., New York, N. Y.  
 Kinney Mfg. Co., Boston, Mass.  
 Lucas Pump Co., The, Dayton, O.  
 Luitwieler Pumping Engine Co., Rochester, N. Y.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Stewart Heater Co., Buffalo, N. Y.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, MARINE.

Burnham—Union Steam Pump Co., Battle Creek, Mich.  
 Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 Chalmers Pump & Mfg. Co., Lima, Ohio.  
 Davidson, M. T., Co., New York, N. Y.  
 Dayton-Dowd Co., Quincy, Ill.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 ♦ Deming Co., The, Salem, O.  
 Douglas—W. & R. Douglas, Middletown, Conn.  
 Dow Pump & Diesel Engine Co., San Francisco, Calif.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 ♦ McGowan, John H. Co., Cincinnati, O.  
 Myers New Century—F. E. Myers & Bro., Ashland, O.  
 National Steam Pump Co., Upper Sandusky, Ohio.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Transit—National Transit Pump & Machine Co., Oil City, Pa.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, WASH. SOAP, ETC.

Blackmer Rotary Pump Power & Mfg. Co., Petoskey, Mich.  
 Davidson, M. T., Co., New York, N. Y.  
 Dayton-Dowd Co., Quincy, Ill.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 Erie Pump & Equipment Co., Erie, Pa.  
 Foster Pump Works, Brooklyn, N. Y.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Stewart Heater Co., Buffalo, N. Y.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Wagener—Wagener Steam Pump Works, Canton, O.

#### PUMPS, MEASURING.

American—The American Oil Pump & Tank Co., Dayton, O.  
 Bowser, S. F., & Co., Ft. Wayne, Ind.  
 Climax—Keystone Boiler & Foundry Co., Landisville, Pa.  
 Columbian Steel Tank Co., Kansas City, Mo.  
 Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
 Doran—Doran Mfg. Co., Chicago, Ill.  
 Economy—Economy Gas Machine Co., Rochester, N. Y.  
 Gilbert & Barker—Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Guarantee Liquid Measure Co., Rochester, Pa.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.



Imperial—Western Oil Pump & Tank Co., St. Louis, Mo.  
 Midland—Midland Brass Works, Inc., Ft. Worth, Texas.  
 Inglis Mfg. Co., Milwaukee, Wis.  
 Milwaukee Tank Works, Inc., Milwaukee, Wis.  
 Rapidayton—Dayton Pump & Mfg. Co., Dayton, O.  
 Taber Pump Co., Buffalo, N. Y.  
 Tokheim Oil Tank & Pump Co., Fort Wayne, Ind.  
 Triune—The Vac Liquid Equipment Co., Cedar Rapids, Iowa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**PUMPS, MILK, SANITARY.**

◆ American Marsh—American Steam Pump Co., Battle Duro—Lucas-Miner Pump Co., Chicago, Ill.  
 Gardner Governor Co., Quincy, Ill.  
 Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
 Tool & Production Co., Dayton, O.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Union—Union Steam Pump Co., Battle Creek, Mich.  
 Worthington Pump & Machinery Corp., New York.

**PUMPS, MINE.**

Advance Pump & Compressor Co., Battle Creek, Mich.  
 Alberger—Alberger Pump & Condenser Co., New York.  
 Aldrich—Allentown Rolling Mills, Allentown, Pa.  
 ◆ American—American Steam Pump Co., Battle Creek, Mich.  
 American Well Works, Aurora, Ill.  
 Boyts, Porter & Co., Connellsville, Pa.  
 Bulldozer and Century—F. E. Myers & Bro., Ashland, O.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron—A. S. Cameron Steam Pump Works, New York.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Crawford & McCrimmon Co., Brazil, Ind. (Lead lined, steam & electric).  
 Davidson, M. T. Co., New York, N. Y.  
 Dayton-Dowd Co., Quincy, Ill.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 D'Olier Centrifugal Pump & Machine Co., Philadelphia.  
 Dubois—Byron Jackson Iron Works, San Francisco.  
 Duit—Lucas-Miner Tool & Production Co., Dayton, Ohio.  
 Economy Pumping Machinery Co., Chicago, Ill.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 ◆ Fairbanks, Morse & Co., Chicago, Ill.  
 Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.  
 Gardner Governor Co., Quincy, Ill.  
 Garrett's—W. T. Garrett & Co., San Francisco, Cal.  
 Georgia Iron Works, Augusta, Ga.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Govne—The Govne Steam Pump Co., Ashland, Pa.  
 Handy Billy—Humphreys Mfg. Co., The, Mansfield, O.  
 Ingersoll-Rand Co., New York, N. Y.  
 ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Layne & Bowler Co., Memphis, Tenn.  
 Luftweller Pumping Engine Co., Rochester, N. Y.  
 ◆ McGowan—John H. McGowan Co., The, Cincinnati, O.  
 ◆ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Midwest Engine Co., Indianapolis, Ind.  
 Morris Machine Works, Baldwinville, N. Y.  
 National Steam Pump Co., Upper Sandusky, Ohio.  
 Platt Iron Works, Dayton, Ohio.  
 Pneumoelectric Corporation, Syracuse, N. Y.  
 Pulling—Columbus Steam Pump Works Co., The, Columbus, O.  
 Roturho—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Smith-Valle—The Platt Iron Works Co., Dayton, O.  
 Sullivan Machinery Co., Chicago, Ill.  
 Terry Steam Turbine Co., The, Hartford, Conn.  
 Union Steam Pump Co., Battle Creek, Mich.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Wakener—Wakener Steam Pump Works, Canton, O.  
 Weinman Machine Works, Columbus, O.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**PUMPS, OIL, FUEL.**

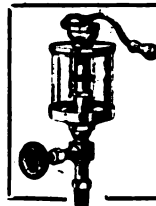
(See "Systems, Fuel Oil Pumping.")

Aldrich—Aldrich Pump Co., Allentown, Pa.  
 ◆ American Steam Pump Co., Battle Creek, Mich.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Lieman Bros. New York, N. Y.  
 Tate-Jones & Co., Inc., Pittsburgh, Pa.  
 Union—Union Steam Pump Co., Battle Creek, Mich.  
 Wakener Steam Pump Works, Canton, O.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Worthington Pump & Machinery Corp., New York.

**PUMPS, OIL, LUBRICATING.**

(See also "Lubricators, Force Feed.")

Acorn—Acorn Brass Mfg. Co., Chicago, Ill.  
 ◆ American Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Atlas—Atlas Brass Foundry Co., Columbus, O.  
 Axelson—Axelson Machine Co., Los Angeles, Cal.

**ESSEX OIL PUMPS****"The Complete Line"**

All styles and sizes. Efficient—reliable—durable.

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**ESSEX BRASS CORPORATION**

2004 Franklin St., Detroit, Mich.

Beacon—The Wm. Powell Co., Cincinnati, O.  
 Billow—National Supply Co., Chicago, Ill.  
 Blackmer—Blackmer Rotary Pump Power Mfg. Co., Petoskey, Mich.  
 ◆ Buffalo—Sherwood Mfg. Co., Buffalo, N. Y.  
 ◆ Cadet, Beacon—Wm. Powell Co., The, Cincinnati, O.  
 Case—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
 Cleveland Steel Barrel Co., Cleveland, O.  
 Combination—Essex Brass Corp., Detroit, Mich.  
 Connersville—Connersville Blower Co., Connersville, Ind.  
 Crane Co., Chicago, Ill.  
 ◆ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Essex—Essex Brass Corp., Detroit, Mich.  
 Farnan—Farnan Brass Works, Cleveland, O.  
 ◆ Felthousen (hand)—Sherwood Mfg. Co., Buffalo, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 ◆ Gardner Governor Co., Quincy, Ill.  
 Garrett, W. D. & Co., New York.  
 Garvin Machine Co., The, New York, N. Y.  
 Gilbert & Barker—Gilbert & Barker Mfg. Co., New York, N. Y.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Hall's—Hall Mfg. Co., Harrison, N. J.  
 Hanson—Jos. Hanson, Inwood, Iowa.  
 ◆ Hart (Force Sight Feed)—Sherwood Mfg. Co., Buffalo, N. Y.  
 Hills-McCanna Co., Chicago, Ill.  
 Ideal—American Lubricator Co., Detroit, Mich.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Judson Governor Co., Rochester, N. Y.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 ◆ King—Michigan Lubricator Co., Detroit, Mich.  
 Kipp—Madison-Kipp Corp., Madison, Wis. (sight feed and blind feed).  
 ◆ Lever—Sherwood Mfg. Co., Buffalo, N. Y.  
 Lipman—Lipman Mfg. Co., The, Beloit, Wis.  
 Little Niagara—Hudson Pump Co., Inc., Jersey City, N. J.  
 ◆ Lonergan—J. E. Lonergan Co., Philadelphia, Pa. (hand).  
 ◆ Lunkenheimer Co., Cincinnati, O. Trade names—Alpha, Invincible, Marvel, Universal.  
 Manzel—Manzel Brothers Co., Buffalo, N. Y.  
 McCullough Mfg. Co., Minneapolis, Minn.  
 McDonald Mfg. Co., A. Y., Dubuque, Iowa.  
 ◆ Michigan—Michigan Lubricator Co., Detroit, Mich.  
 Nathan Mfg. Co., New York, N. Y.  
 Nugent—Wm. W. Nugent & Co., Chicago, Ill.  
 Oberdorfer, M. L. Brass Co., Syracuse, N. Y.  
 ◆ Penberthy Injector Co., Detroit, Mich.  
 ◆ Pennant—The Wm. Powell Co., Cincinnati, O.  
 Pickering—The Pickering Governor Co., Portland, Conn.  
 ◆ Rapid—The Wm. Powell Co., Cincinnati, O.  
 Richardson Phenix Co., Milwaukee, Wis.  
 ◆ Rochester—Green, Tweed & Co., New York, N. Y.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 ◆ Sherman Mfr. Co., H. B., Battle Creek, Mich.  
 ◆ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.  
 ◆ Speedy—The Wm. Powell Co., Cincinnati, O.  
 Sterling—Interstate Machine Co., New London, Conn.  
 Superior—American Lubricator Co., Detroit, Mich.  
 Swift—The Swift Lubricator Co., Elmira, N. Y.  
 Thompson—Star Brass Mfg. Co., Boston, Mass.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Twinvolute Pump & Mfg. Co., Newark, N. J.  
 Unique—Fosston-Carpenter Co., St. Paul, Minn.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Wayne—Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Webster & Perks Tool Co., Springfield, O.  
 Wegener Steam Pump Works, Canton, Ohio.  
 Western Oil Pump & Tank Co., St. Louis, Mo.  
 Wilson-Snyder Mfg. Co., Pittsburgh, Pa.

**PUMPS, OIL WELL.**

Norris, W. C., Tulsa, Okla.

**PUMPS, ORGAN.**

(See "Motors, Organ")

Atmos—American Atmos Corp., Pittsburgh, Pa.

**PUMPS, PLUMBERS' FORCE.**

B. B. Specialty Co., Pittsburgh, Pa.  
 Relfield & Co., H. Philadelphia, Pa.  
 Bernz Co., Otto, Newark, N. J.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Coleman's—Allen J. Coleman, Chicago, Ill.  
 ◆ Deming Co., The, Salem, O.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Kennedy, J. E., New York, N. Y.  
 Lawless—Newark Brass Works, Newark, N. J.  
 Noppel—Garrison Brass & Machine Co., New York.  
 Ohio Pump & Brass Co., Columbus, O.  
 Penn—Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Perkes, Chas., Estate of, Philadelphia, Pa.  
 Positive—Cullen Mfg. Co., Pittsburgh, Pa.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### PUMPS, PLUNGER, OUTSIDE PACKED.

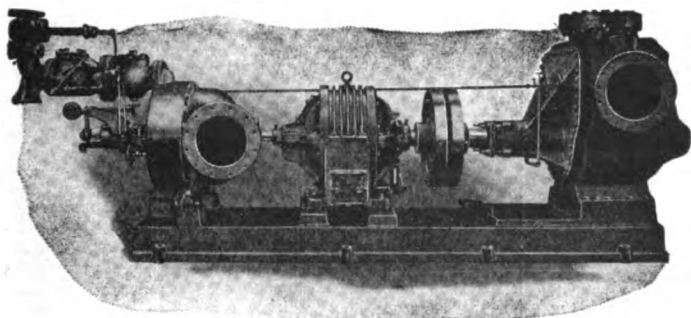
Advance Pump & Compressor Co., Battle Creek, Mich.  
 ♦ American—American Steam Pump Co., Battle Creek, Mich.  
 Cameron—A. S. Cameron Steam Pump Works, New York.  
 Chalmers Pump & Mfg. Co., Wooster, Ohio.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Cook, A. D., Lawrenceburg, Ind.  
 Davidson, M. T., Co., New York, N. Y.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 ♦ Deming Co., The, Salem, O.  
 Gardner Governor Co., Quincy, Ill.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Laughlin, Thos., Co., The, Portland, Me.  
 Luftwiler Pumping Engine Co., Rochester, N. Y.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 ♦ Marsh—American Steam Pump Co., Battle Creek, Mich.  
 Midwest Engine Co., Indianapolis, Ind.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 Platt Iron Works, Dayton, Ohio.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Smith-Vaile—The Platt Iron Works Co., Dayton, O.  
 Standard—Lucas-Miner Tool & Production Co., The, Dayton, O.  
 ♦ Union Steam Pump Co., Battle Creek, Mich.  
 Wagener—Wagener Steam Pump Works, Canton, O.  
 Worthington Pump & Machinery Corp., New York.

#### PUMPS, POWER, BELT, ENGINE OR MOTOR DRIVEN.

(See also "Pumps, Artesian or Deep Well.")

Advance—Advance Pump & Compressor Co., Battle Creek, Mich.  
 Adkins, Young & Allen Co., Chicago, Ill.  
 Aldrich—Aldrich Pump Co., Allentown, Pa.  
 ♦ American, Marsh—American Steam Pump Co., Battle Creek, Mich.  
 American—The American Well Works, Aurora, Ill.  
 Backus Water Motor Co., Newark, N. J.  
 Barber—King Brothers, Syracuse, N. Y. (with gas engine).  
 Barnes Mfg. Co., The, Mansfield, O.  
 Bestyet—The Lucas Pump Co., Dayton, O.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Blake Pump & Condenser Co., Fitchburg, Mass.  
 Blakeslee—American Blakeslee Mfg. Co., Birmingham, Ala.  
 Blackmer Rotary Pump Power & Mfg. Co., Petoskey, Mich.  
 Bolcourt—Midland Brass Works, Inc., The, Ft. Worth, Tex.  
 Bousier & Co., S. F., Fort Wayne, Ind.  
 Boyts-Porter & Co., Philadelphia, Pa.  
 Buckeye—The Buckeye Pump & Mfg. Co., Columbus, Ohio.  
 Buckeye—Maat, Foos & Co., Springfield, O.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Bulldozer—F. E. Myers & Bro., Ashland, O.  
 Burlingame Co., Worcester, Mass.  
 Cameron—A. S. Cameron Steam Pump Works, New York, N. Y.  
 Canton-Hughes—Chalmers Pump & Mfg. Co., Lima, Ohio.  
 C. H. & E. Manufacturing Co., Inc., Milwaukee, Wis.  
 Champlon—The Cleveland Faucet Co., Cleveland, O.  
 Chicago Well Supply Co., Chicago, Ill.  
 Coleo—The Lucas Pump Co., Dayton, O.  
 Columbus Pump Supply Co., The, Columbus, O.  
 Connellsville Mfg. & Mine Sup. Co., Connellsville, Pa.  
 Connorsville Blower Co., Connorsville, Ind.  
 Consolidated Mfg. Co., Dayton, O.  
 Cook, A. D., Lawrenceburg, Ind.  
 Davis—Pratt & Cady Co., Inc., Hartford, Conn.  
 Davidson, M. T., Co., New York, N. Y.  
 Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
 Dean Bros. Steam Pump Works, Indianapolis, Ind.  
 ♦ Deming Co., The, Salem, O. Trade names—Atlas, Geyser, Giant.  
 Domestic Engine & Pump Co., Shippenburg, Pa.  
 Douglas—W. & R. Douglas, Middletown, Conn.  
 Downie—Keystone Driller Co., Beaver Falls, Pa.  
 Du Bois Iron Works, Du Bois, Pa.  
 Duit, Duro—The Lucas Pump Co., Dayton, O.  
 Eclipse—United Iron Works, Oakland, Cal.

Eclipse Pump—Fairbanks, Morse & Co., Chicago.  
 Edwards Electro Portable—Edwards Mfg. Co., Cincinnati, O.  
 Erie Pump & Engine Works, Inc., Medina, N. Y.  
 Fairbanks Co., The, New York, N. Y.  
 Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.  
 Farrar Pump & Machinery Co., St. Louis, Mo. (Duplex & Triplex).  
 Field Force Pump Co., Elmira, N. Y. Trade names—Senior Triplex, Junior Triplex, Empire Duplex.  
 Foos Gas Engine Co., Springfield, O.  
 Foster Pump Works, Brooklyn, N. Y.  
 Fuller & Johnson Mfg. Co., Madison, Wis.  
 ♦ Gardner Governor Co., Quincy, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Glendora—Worthington Pump & Machinery Co., New York.  
 Glenn & Stiteler, Philadelphia, Pa.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Goynes—Goynes Steam Pump Co., Ashland, Pa.  
 Hall—Hall Steam Pump Co., Pittsburgh, Pa.  
 Hayton Pump Co., Quincy, Ill.  
 Heisler Co., The, St. Marys, O.  
 Heller-Aller Co., The, Napoleon, O.  
 Hercules—The Hercules Corp., Evansville, Ind.  
 Hinman & Co., D. A., Sandwich, Ill.  
 Holland—Holland Machine Co., New York, N. Y.  
 Hooker Steam Pump Co., St. Louis, Mo.  
 Hope Forge & Machine Co., Mt. Vernon, O.  
 Hooker—Blunt & Walling Mfg. Co., Kendallville, Ind.  
 Hough, The, Chas. N., Mfg. Co., Franklin, Pa. (Oil well).  
 Humphries Mfg. Co., The, Mansfield, O.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo. (for gasoline and oil).  
 Imperial, Jupiter—The Barnes Mfg. Co., Mansfield, Ohio.  
 Improved Triumph—The Ohio Pump & Brass Co., Columbus, O.  
 Ives—Ives Mfg. Co., Baltimore, Md. (tank).  
 Jarvis—The Jarvis Engine & Machine Works, Lansing, Mich.  
 Johnson—John Johnson Co., Brooklyn, N. Y.  
 Kellogg—Kellogg Mfg. Co., Rochester, N. Y.  
 Kinney—Kinney Mfg. Co., Boston, Mass.  
 Klotz Machine Co., Sandusky, O.  
 Lawrence Pump & Engine Co., Lawrence, Mass.  
 Leader Iron Works, Decatur, Ill.  
 Lucas-Miner Tool & Production Co., Dayton, O.  
 Luftwiler Pumping Engine Co., Rochester, N. Y.  
 McDonald, A. Y., Mfg. Co., Dubuque, Iowa.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 McLaughlin—Geo. C. McLaughlin Mfg. Co., Boston.  
 Midwest Engine Co., Indianapolis, Ind.  
 Myers, F. E., & Bro., Ashland, O. Trade Names—High Duty, Imperial, Century, Defiance.  
 Mist—Fairbanks, Morse & Co., Chicago, Ill.  
 M. & B.—Masseth Packer & Machine Works, Butler, Pa.  
 Monitor—The Humphries Mfg. Co., Mansfield, O.  
 National Transit Pump & Machine Co., Oil City, Pa.  
 New Era—The New Era Gas Engine Co., Dayton, O.  
 North American Engine Co., Algona, Iowa.  
 Novo—Novo Engine Co., Lansing, Mich.  
 Ohio Valley Supply Co., The, Marietta, O.  
 Oil Pump & Specialty Co., Chicago, Ill.  
 Otto Gas Engine Works, Philadelphia, Pa.  
 Park Mfg. Co., The, Charlotte, N. C.  
 Patterson—Patterson-Kelley Co., The, New York, N. Y.  
 Patten Bros. Co., The, Marietta, O.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.  
 Peters Pump Co., Kewanee, Ill.  
 ♦ Pitman—F. E. Myers & Bro., Ashland, O.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Price, G. W., Pump & Engine Co., San Francisco.  
 Pulling—Columbus Steam Pump Works Co., The, Columbus, O.  
 Pyramid—Goulds Mfg. Co., The, Seneca Falls, N. Y.  
 Quick & Thomas Co., Auburn, N. Y.  
 Quimby—Wm. E. Quimby, Inc., New York, N. Y.  
 Rider-Ericsson Engine Co., New York, N. Y.  
 Roberts Gem—Geo. J. Roberts & Co., Dayton, O.  
 Roots P. H. & F. M. Roots Co., Connersville, Ind.  
 Roturbo—Manistee Iron Works Co., Manistee, Mich.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Sandusky Foundry & Machine Co., The, Sandusky, O.  
 Sanitary—The Sanitary Pump Co., Dayton, O.  
 Schramm, Chris. D., & Son, Inc., Philadelphia, Pa.  
 Scranton Pump Co., Scranton, Pa.  
 Smith-Vaile—The Platt Iron Works Co., Dayton, O.  
 Standard Pump & Engine Co., The, Akron, O.  
 Standard—The Lucas Pump Co., Dayton, O.  
 Star—Star Pump Co., Boston, Mass.  
 Stine, J. C., Co., The, Tyrone, Pa.  
 Strang Engine Co., Chicago, Ill.  
 Texas Mfg. Co., Fort Worth, Tex.  
 Torrent—Fairbanks, Morse & Co., Chicago, Ill.  
 Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
 Transit—National Transit Pump & Machine Co., Oil City, Pa.  
 Traylor Engineering & Mfg. Co., Allentown, Pa.  
 Triumph—Ohio Pump & Brass Co., Columbus, O.



**Kinney Steam Jacketed Pump with steam turbine drive  
Kinney Manufacturing Co., Boston, Mass.**

**Kinney**  
QUALITY  
EFFICIENCY

**Rotating Plunger Pumps for  
pumping heavy or light viscous  
materials. Asphalts, Tars, Crude  
Oils, Fuel Oils, Lubricating Oils,  
Greases, Molasses, Glucose,  
Lards, etc.**

Trumbone—The Pattin Bros. Co., Marietta, O.  
Typhoon—Fairbanks, Morse & Co., Chicago, Ill.  
Union Steam Pump Co., Battle Creek, Mich.  
U. S. Wind Engine & Pump Co., Batavia, Ill.  
V. & K.—Valle & Kimes, Dayton, O.  
Van Wie Pump Co., Syracuse, N. Y.  
Wagener Steam Pump Works, Canton, O.  
Waldo Bros. & Bond Co., Boston, Mass.  
Warlo—Ward-Love Pump Corp., Rockford, Ill.  
Weinman Machine Works, Columbus, O.  
Worthington—Worthington Pump & Machinery Corp.,  
New York, N. Y.  
Yeomans—Yeomans Bros., Chicago, Ill.  
Young Machine Co., Michigan City, Ind.

#### **PUMPS, PRESSURE.**

Aldrich Pump Co., Allentown, Pa.  
Gardner Governor Co., Quincy, Ill.  
Midwest Engine Co., Indianapolis, Ind.  
Wagener Steam Pump Works, Canton, O.

#### **PUMPS, PRESSURE BOOSTING AND WATER CIRCULATING.**

Trane Co., The, LaCrosse, Wis.

#### **PUMPS, QUARRY, RAILROAD, FORCE, VINEGAR, TANNERY, ETC.**

Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
Worthington Pump & Machinery Corp., New York.

#### **PUMPS, RATCHET, HANDLER.**

Deming Co., The, Salem, O. Trade names—Deming,  
Climax, Giant Peerless.  
Myers—F. E. Myers & Bro., Ashland, O.  
Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
Wagener Steam Pump Wks., Canton, Ohio.  
Worthington Pump & Machinery Corp., New York.

#### **PUMPS, ROTARY.**

(See also "Pumps, Centrifugal.")

Advance Pump & Compressor Co., Battle Creek, Mich.  
American Rotary Pump Co., Boston, Mass.  
American Shop Equipment Co., Chicago, Ill.  
Automatic Rotary Pump Co., New York, N. Y.  
Bagley & Sewall Co., The, Watertown, N. Y.  
Barber—King Bros., Syracuse, N. Y. (with gas engine).  
Barnes Mfg. Co., The, Mansfield, O.  
Beach-Russ—Beach-Russ Co., New York, N. Y.  
Blackmer—Blackmer Rotary Pump, Power & Mfg.  
Co., Petoskey, Mich. (beer, bilge, gasoline, oil,  
soap and ammonia).  
Clifton—Clifton-Pratt Co., Cincinnati, O.  
Connersville Cycloldal—Connersville Blower Co., Con-  
nersville, Ind.  
Curtis—Pittsburgh Machine Tool Co., Braddock, Pa.  
Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
Douglas, W. & B., Middletown, Conn.  
Erwin—Erwin & Co., Chicago, Ill.  
Excelsior—Foster Pump Works, Brooklyn, N. Y.  
Goulds—Goulds Mfg. Co., Seneca Falls, N. Y.  
Hall Mfg. Co., Cedar Rapids, Iowa.  
Hatton Piston—Lebanon Machine Co., Lebanon,  
N. H.  
Humphries Mfg. Co., The, Mansfield, O.  
Hunt—Rodney Hunt Machine Co., Orange, Mass.  
Kinney—Kinney Mfg. Co., Boston, Mass.  
Lammert & Mann Co., Chicago, Ill.  
Leiman Bros., New York, N. Y.  
Lobee—Lobee Pump & Machinery Co., Buffalo, N. Y.  
McDonald Mfg. Co., A. Y., Dubuque, Iowa.  
Northern—Northern Fire Apparatus Co., Minneapolis,  
Minn.

Oil Well Supply Co., Pittsburgh, Pa.  
Old Reliable—Wilbraham Green Blower Co., Potts-  
town, Pa.  
Root's—P. H. & F. M. Roots Co., Connersville, Ind.  
Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
Schramm—Chris D. Schramm and Son, Inc., Phila-  
delphia, Pa.  
Southwark Foundry & Machine Co., Philadelphia, Pa.  
Taber—Taber Pump Co., Buffalo, N. Y.  
Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.  
Trimount—Trimount Rotary Power Co., E. Dedham,  
Mass.  
Triune—The Vac Liquid Equipment Co., Cedar Rapids,  
Iowa.  
Type B—Humphrey Machine Co., Keene, N. H.  
Warlo—Ward-Love Pump Corp., Rockford, Ill.  
Webster & Perks Tool Co., Springfield, O. (geared).

#### **PUMPS, ROTATING PLUNGER TYPE.**

**Kinney—Kinney Mfg. Co., Boston, Mass.**

#### **PUMPS, SAND AND GRAVEL.**

American Well Works, Aurora, Ill.  
Buffalo Steam Pump Co., Buffalo, N. Y.  
Byron Jackson Iron Works, San Francisco, Cal.  
Erie Pump & Equipment Co., Erie, Pa.  
Frenier & Son, Rutland, Vt.  
Lawrence Pump & Engine Co., Lawrence, Mass.  
Kingsford Foundry & Machine Co., Oswego, N. Y.  
Midwest Engine Co., Indianapolis, Ind.  
Nye Steam Pump & Machinery Co., Chicago, Ill.  
Spang—Spang & Co., Butler, Pa.

#### **PUMPS, SCREW TEST.**

◆ American Steam Gauge & Valve Mfg. Co., Boston.  
Byron-Jackson Iron Works, San Francisco, Calif.  
Lonergan, J. E., Co., Philadelphia, Pa.  
Midwest Engine Co., Indianapolis, Ind.

#### **PUMPS, SINK.**

(See Pumps, Cistern.)

#### **PUMPS, SINKING.**

Aldrich Pump Co., Allentown, Pa.  
Boyts, Porter & Co., Connellsville, Pa.  
Cameron—A. S. Cameron Steam Pump Works, New  
York.  
Davidson, M. T., Co., New York, N. Y.  
Emerson Steam Pump Co., Alexandria, Va.  
Erie Pump & Engine Co., Erie, Pa.  
Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
◆ Marsh—American Steam Pump Co., Battle Creek,  
Mich.  
Pulsometer—Pulsometer Steam Pump Co., Irvington,  
N. J.  
Roturbo—Manistee Iron Works Co., Manistee, Mich.  
Smith-Valle—The Platt Iron Works Co., Dayton, O.  
Union Steam Pump Co., Battle Creek, Mich.

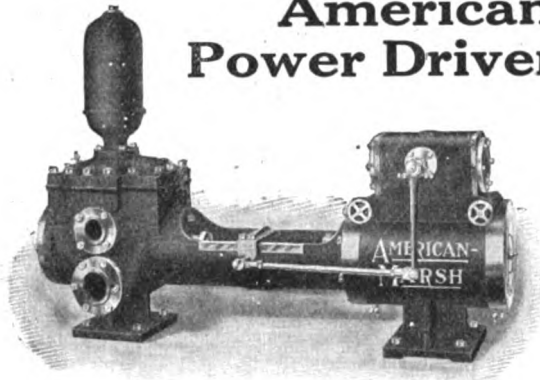
#### **PUMPS, SPRAY.**

Admiral—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Alert—Lucas-Miner Tool & Production Co., Dayton,  
Ohio.  
◆ American Marsh—American Steam Pump Co., Battle  
Creek, Mich.  
Barnes Mfg. Co., The, Mansfield, O.  
Bean—Bean Spray Pump Co., San Jose, Cal.  
Berger Mfg. Co., The, Canton, O.  
Blazer Patent—Humphries Mfg. Co., Mansfield, O.  
◆ Bonanza—The Deming Co., Salem, O.  
Bordeaux—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Ruckeva—Mast, Foss & Co., Springfield, O.  
◆ Century—The Deming Co., Salem, O.

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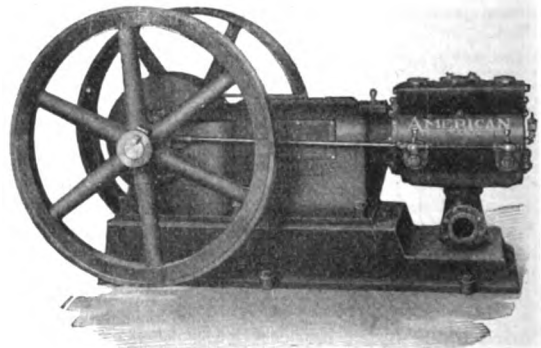
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Battle Creek, Michigan



**American Belted Air Compressor**

- Chicago Well Supply Co., Chicago, Ill.
- Chimax—McCormick Mfg. Co., Dayton, O.
- Combination—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Comet—H. B. Rusler Mfg. Co., Johnstown, O.
- Crestline Mfg. Co., Crestline, Ohio.
- Domestic Engine & Pump Co., Shippensburg, Pa.
- Douglas—W. & B. Douglas, Middletown, Conn.
- Drednaught—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Duplex—The Deming Co., Salem, O.
- Durite—Lucas-Miner Pump Co., Chicago, Ill.
- Emperor—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Empire King—Field Force Pump Co., Elmira, N. Y.
- Empire Leader, White Star—Field Force Pump Co., Elmira, N. Y.
- Eureka Mower Co., Utica, N. Y.
- Farmer's Choice, Barrel Protector, Bucket—Humphryes Mfg. Co., Mansfield, O.
- Famous—Lucas-Miner Pump Co., Chicago, Ill.
- ◆ Farmers Friend—The Deming Co., Salem, O.
- Fruittall—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Fuller & Johnson, Madison, Wis.
- ◆ Gardner's Choice—The Deming Co., Salem, O.
- Handy—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Hardie Mfg. Co., The Hudson, Mich.
- Humphryes Mfg. Co., The Mansfield, O.
- Hunt Brass Works, Chicago, Ill.
- Hurst—H. L. Hurst Mfg. Co., Greenwich, O.
- Imperial—F. E. Myers & Bro., Ashland, O.
- Invincible—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Junior—The Deming Co., Salem, O.
- Kant-King—Rochester Spray Pump Co., Rochester.
- Koenigkramer, F. & F., Cincinnati, O.
- Leader-Ospraymo—Field Force Pump Co., Elmira.
- Little Giant—F. E. Myers & Bro., Ashland, O.
- Lucas Pump Co., The Dayton, O.
- ◆ Major—The Deming Co., Salem, O.
- Myers, F. E., & Bro., Ashland, Ohio. (Trade names—Century, Cog Gear, Duplex Automatic, Faultless, Myers Improved, Myers O. K. Perfect, Myers Whitewashing, Triplex Automatic.)
- The Campbell-Hausfeld Co., Harrison, O.
- ◆ Perfect Success—The Deming Co., Salem, O.
- Perfection—The Barnes Mfg. Co., Mansfield, O.
- ◆ Planters' Gem—The Deming Co., Salem, O.
- ◆ Planters' Tractor—The Deming Co., Salem, O.
- Pomona—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Positive—The Deming Co., Salem, O.
- ◆ Prize—The Deming Co., Salem, O.
- Rumsey's Dandy, Florida, Superior, Watch—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.
- ◆ Sherman Mfg. Co., E. B., Battle Creek, Mich.

- Standard—The Goulds Mfg. Co., Seneca Falls, N. Y.
- Standard—The Armstrong Mfg. Co., Huntington, W. Va.
- Star Pointer Pump Mfg. Co., Menasha, Wis.
- Sturdy—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Success—The Deming Co., Salem, O.
- ◆ Success Sterling—The Deming Co., Salem, O.
- Sunshine—The Crestline Mfg. Co., Crestline, O.
- Union Steam Pump Co., Battle Creek, Mich.
- ◆ Universal Success—The Deming Co., Salem, O.
- Vac Liquid Equipment Co., Cedar Rapids, Ia.
- Vice-Admiral—The Goulds Mfg. Co., Seneca Falls, N. Y.
- ◆ Victory—The Deming Co., Salem, O.
- Warlo—Ward-Love Pump Corp., Rockford, Ill.
- Watson-Ospraymo—Field Force Pump Co., Elmira, N. Y.
- ◆ Weed—The Deming Co., Salem, O.
- Wilson & Bennett Mfg. Co., Chicago, Ill.

## PUMPS, STEAM.

- Abbe—Abbe Engineering Co., New York.
- Advance—Advance Pump & Compressor Co., Battle Creek, Mich.
- Albany—Albany Steam Trap Co., Albany, N. Y.
- Allis-Chalmers Co., Milwaukee, Wis.
- ◆ American—American Steam Pump Co., Battle Creek, Mich.
- American Well & Prospecting Co., Corsicana, Tex.
- American—The American Well Works, Aurora, Ill.
- Blake Pump & Condenser Co., Fitchburg, Mass.
- Blakeslee—Blakeslee Mfg. Co., Duquoin, Ill.
- Boyd—Baltimore Pump Co., The Baltimore, Md.
- Boys, Porter & Co., Connellsville, Pa.
- Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.
- Burnham—Union Steam Pump Co., Battle Creek, Mich.
- Cameron—A. S. Cameron Steam Pump Works, New York.
- Cameron—Ingersoll-Rand Co., New York, N. Y.
- Canton-Hughes—Chalmers Pump & Mfg. Co., Lima, Ohio.
- Chicago Knowles—Furness Bros. Co., Chicago, Ill.
- C. H. Wheeler—C. H. Wheeler Mfg. Co., Philadelphia.
- Codd Co., E. J., Baltimore, Md.
- Cook, A. D., Lawrenceburg, Ind.
- "Davidson"—Davidson, M. T. Co., New York, N. Y.
- Davidson—Ernst & Co., Newark, N. J.
- Dean Bros Steam Pump Works, Indianapolis, Ind.
- ◆ Downie—Keystone Driller Co., Beaver Falls, Pa.
- Du Bois Iron Works, Du Bois, Pa.
- Duplex—Jarvis Engine & Machine Works, Lansing, Mich.

Emerson—The Emerson Pump & Valve Co., Inc., Alexandria, Va.

Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.

Fair Haven Foundry & Machine Co., Fair Haven, Vt.

Farrar Pump & Machinery Co., St. Louis, Mo.

Filer & Stowell Co., Milwaukee, Wis.

Foster—Foster Pump Works, Brooklyn, N. Y.

Furness Bros.—Furness Bros. Co., Chicago, Ill.

Gardner Governor Co., The, Quincy, Ill.

Garrett, W. D. & Co., New York.

Goyne—The Goyne Steam Pump Co., Ashland, Pa.

Grant Iron Works, Mahanoy City, Pa.

Guild & Garrison, Brooklyn, N. Y.

Hall—Hall Steam Pump Co., Pittsburgh, Pa.

Henderson Iron Wks. & Supply Co., The, W. K. Shreveport, La.

Hooker—Reliance Machine & Tool Works, St. Louis.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio (hydraulic).

Jamieson, M. W. & Co., Warren, Pa.

Johnson, John, Co., Brooklyn, N. Y.

Karnak—Adkins, Young & Allen Co., Chicago, Ill.

Latta-Martin Pump Co., Hickory, N. C.

Lathbury, D'Olier Co., Philadelphia, Pa.

Locke—E. R. Young & Sons, Titusville, Pa.

Lucas Miner Pump Co., Dayton, O.

♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.

♦ Marsh—American Steam Pump Co., Battle Creek, Mich.

Mecklenburg Iron Works, Charlotte, N. C.

Midwest Engine Co., Indianapolis, Ind.

Moore—Union Steam Pump Co., Battle Creek, Mich.

Mud Hog—Oil Well Supply Co., Pittsburgh, Pa.

National Steam Pump Co., The, Upper Sandusky, O.

Oil Well Supply Co., Pittsburgh, Pa.

Park Mfg. Co., The, Charlotte, N. C.

Platt Iron Works, Dayton, Ohio.

Pulling—The Columbus Steam Pump Works Co., Columbus, O.

Pulsometer—Pulsometer Steam Pump Co., Irvington, N. J.

Reilly—National Foundry & Mach. Co., Louisville, Ky.

Rex Duplex—Lucey Mfg. Corp., New York, N. Y.

Roturbo—Manistee Iron Works Co., Manistee, Mich.

Silent—Centrifugal Pump Co., New York, N. Y.

Scranton—Scranton Pump Co., Scranton, Pa.

Shriver—T. Shriver & Co., Harrison, N. J.

Smith-Valle—The Platt Iron Works Co., Dayton, O.

Transit—National Transit, Pump and Machine Co., Oil City, Pa.

Union Steam Pump Co., Battle Creek, Mich.

Vanduzen Co., The, W. W. Cincinnati, O.

Viking Pump Co., New York, N. Y.

Wagener—Wagener Steam Pump Works, Canton, O.

Warren Steam Pump Co., Warren, Mass.

Watson-Stillman Co., The, New York, N. Y.

Weinman Machine Works, Columbus, O.

Wheeler, C. H., Mfg. Co., Philadelphia, Pa.

Willson-Snyder Mfg. Co., Pittsburgh, Pa.

Wood & Co., R. D., Philadelphia, Pa.

Worthington—Worthington Pump & Machinery Corp., New York.

Young Pump Co., Michigan City, Ind.

Yough—Boyle, Porter & Co., Connellsville, Pa.

#### PUMPS, STEAM TURBINE DRIVEN

Kerr Turbine Co., Wellsville, N. Y.

Krogh Pump & Machinery Co., San Francisco, Calif.

Steam Motors Co., Springfield, Mass.

Union—Union Steam Pump Co., Battle Creek, Mich.

#### PUMPS, SUGAR HOUSE.

(See "Pumps, Power," and "Pumps, Steam.")

#### PUMPS, SUMP

Aldrich—Aldrich Pump Co., Allentown, Pa.

♦ American-Marsh—American Steam Pump Co., Battle Creek, Mich.

Midwest Engine Co., Indianapolis, Ind.

♦ Penberthy Injector Co., Detroit, Mich.

Rider-Ericsson Engine Co., New York.

Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

Weinman—The Weinman Pump Mfg. Co., Columbus, O.

#### PUMPS, SIPHON.

Aermotor Co., Chicago, Ill.

Blakeslee Mfg. Co., Duquoin, Ill.

Barnes Mfg. Co., The, Mansfield, O.

Buckeye—Mast, Foss & Co., Springfield, O.

Challenge—Challenge Co., Batavia, Ill.

♦ Deming Co., The, Salem, O.

Fairbanks, Morse & Co., Chicago, Ill.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.

Humphreys Mfg. Co., The, Mansfield, O.

Kewanee—Kewanee Siphon Pump Co., Kewanee, Ill.

Lausdell's—John S. Lenz's Son & Co., New York, N. Y.

Myers—F. E. Myers & Bro., Ashland, O.

Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

W. & McD.—Watson & McDaniel Co., Philadelphia, Pa.

#### PUMPS, TANK OR LOW SERVICE.

Advance Pump & Compressor Co., Battle Creek, Mich.

♦ Aerospra, Spraeo—The Deming Co., Salem, O.

Aldrich—Aldrich Pump Co., Allentown, Pa.

♦ American—American Steam Pump Co., Battle Creek, Mich.

Blackmer Rotary Pump, Power & Mfg. Co., Petoskey, Mich.

Blake Pump & Condenser Co., Fitchburg, Mass.

Buckeye—Mast, Foss & Co., Springfield, O.

Buffalo Steam Pump Co., Buffalo, N. Y.

Cameron—A. S. Cameron Steam Pump Works, New York.

Challenge—The Goulds Mfg. Co., Seneca Falls, N. Y.

♦ Climax, Giant—The Deming Co., Salem, O.

Davidson, M. T. Co., New York, N. Y.

Davis-Hansen Pump Co., Oshkosh, Wis.

Dayton-Dowd Co., Quincy, Ill.

Erie Pump & Equipment Co., Erie, Pa.

Fairbanks, Morse & Co., Chicago, Ill.

Foster Pump Works, Brooklyn, N. Y.

Gardner—The Gardner Governor Co., Quincy, Ill.

♦ Hart—Sherwood Mfg. Co., Buffalo, N. Y.

Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.

Humphreys Mfg. Co., The, Mansfield, O.

Hunt—Rodney Hunt Machine Co., Orange, Mass.

Knowles Steam Pump Works, New York, N. Y.

Luitwieller Pumping Engine Co., Rochester, N. Y.

Manistee Iron Works Co., Manistee, Mich.

McDonald, A. Y., Mfg. Co., Dubuque, Ia.

♦ McGowan—John H. McGowan Co., The, Cincinnati, O.

♦ Marsh—American Steam Pump Co., Battle Creek, Mich.

Midwest Engine Co., Indianapolis, Ind.

Myers, F. E., & Bro., Ashland, O.

National Steam Pump Co., Upper Sandusky, Ohio.

New Alert—The Goulds Mfg. Co., Seneca Falls, N. Y.

Oliver—The Goulds Mfg. Co., Seneca Falls, N. Y.

Platt Iron Works, Dayton, Ohio.

Pulling—Columbus Steam Pump Works Co., The, Columbus, O.

Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

Soe—Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.

Standard Pump & Engine Co., The, Akron, O.

Stewart Heater Co., Buffalo, N. Y.

Terry Steam Turbine Co., The, Hartford, Conn.

Thresher, Utility—The Goulds Mfg. Co., Seneca Falls, N. Y.

Trahern Pump Div., Geo. D. Roper Corp., Rockford, Ill.

Union Steam Pump Co., Battle Creek, Mich.

Vogt Brothers Mfg. Co., Louisville, Ky.

Warlo—Ward-Love Pump Corp., Rockford, Ill.

Warren Steam Pump Co., Warren, Mass.

Worthington, Henry R., New York, N. Y.

#### PUMPS, TIRE.

(See "Pumps, Automobile Tire.")

#### PUMPS, TRASHED TANK.

Barnes Mfg. Co., Mansfield, O.

Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.

Myers, F. E., & Bro., Ashland, Ohio. (Trade names—Cog Gear, Faultless, Low Down).

Love, M. A., Mfg. Co., Rockford, Ill.

Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.

Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

#### PUMPS, VACUUM.

Advance—Advance Pump & Compressor Co., Battle Creek, Mich.

Alherzer—Alherzer Pump & Condenser Co., New York.

Aldrich—Aldrich Pump Co., Allentown, Pa.

Allen Machine Co., Erie, Pa.

♦ American Air Compressor Works, New York, N. Y.

♦ American—American Steam Pump Co., Battle Creek, Mich.

Automatic Rotary Pump Co., New York, N. Y.

Baker Rotary—Baker-Hansen Mfg. Co., Oakland, Calif.

Beach-Russ—Beach-Russ Co., New York, N. Y.

(Heating and Laboratory.)

Bishop & Babcock Co., The, Cleveland, O.

Blake Pump & Condenser Co., Fitchburg, Mass.

Bulfinch—Buffalo Foundry & Machine Co., The, Buffalo, N. Y.

Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.

Rurv Compressor Co., Erie, Pa.

Chicago—Plant Eng. & Equipment Co., New York.

♦ Chicago Pneumatic Tool Co., New York, N. Y.

Chicago Pump Co., Chicago, Ill.

Connersville Cycloidal—Connersville Blower Co., Connersville, Ind.

Crosby Steam Gage & Valve Co., Boston, Mass.

Crowell Mfg. Co., Brooklyn, N. Y.

Davidson, M. T., Co., New York, N. Y.

Dean Bros. Steam Pump Works, Indianapolis, Ind.

♦ Deming Co., The, Salem, O.

Devine Co., J. P., Buffalo, N. Y.

Dunham—C. A. Dunham Co., Inc., Marshalltown, Ia.

Dureco—National-Standard Co., Niles, Mich.

**Economy**—Economy Pumping Machinery Co., Chicago, Ill.  
**Erwin**—Erwin & Co., Chicago, Ill. (electric).  
**Fairhurst**—American Air Compressor Works, Brooklyn, N. Y.  
**Foster Pump Works**, Brooklyn, N. Y.  
**Gardner Governor Co.**, The, Quincy, Ill.  
**Garrett**, W. D., & Co., New York.  
**General Electric Co.**, Schenectady, N. Y.  
**General Compressed Air & Vacuum Machinery Co.**, St. Louis, Mo.  
**General Condenser Co.**, Philadelphia, Pa.  
**Goulds**—The Goulds Mfg. Co., Seneca Falls, N. Y.  
**Goulds Pump Co.**, Chicago, Ill.  
**Guild & Garrison**, Brooklyn, N. Y.  
**Hall**—Hall Steam Pump Co., Pittsburgh, Pa.  
**Hypress**—L. J. Wing Mfg. Co., New York, N. Y.  
**Hytor**—Nash Engineering Co., South Norwalk, Conn. (hydro turbine).  
**Ingersoll-Rand Imperial**—Ingersoll-Rand Co., New York, N. Y.  
**Kerr**—Kerr Machinery Corp., Detroit, Mich.  
**Koerting Universal**—Schutte & Koerting Co., Philadelphia, Pa.  
**Lebrant**—Kruger & Blind Co., Philadelphia, Pa.  
**Lammert & Mann Co.**, Chicago, Ill.  
**Lieban Bros.**, New York, N. Y. (Rotary).  
**Leonard**, Fredk., Cleveland, O.  
**May-Nelson Mfg. Co.**, Washington, D. C.  
**McAlear**—McAlear Mfg. Co., Chicago, Ill.  
**McDonald**—The McDonald Bros. Co., Cleveland, O.  
**McGowan**—John H. McGowan Co., The, Cincinnati, O.  
**Manistee Iron Works Co.**, Manistee, Mich.  
**Marsh**—American Steam Pump Co., Battle Creek, Mich.  
**Mesta**—Mesta Machine Co., Pittsburgh, Pa.  
**Minster Machine Co.**, The, Minster, O.  
**National Steam Pump Co.**, Upper Sandusky, Ohio.  
**Parker-Brunner Mfg. Co.**, Utica, N. Y. (small).  
**Pennsylvania Pump & Compressor Co.**, Easton, Pa.  
**Pittsburgh Gage & Supply Co.**, Pittsburgh, Pa.  
**Provo**—Provo Engineering Corp., Brooklyn, N. Y.  
**Pulling**—The Columbus Steam Pump Works Co., Columbus, O.  
**Radojet**—C. H. Wheeler Mfg. Co., Philadelphia, Pa.  
**Receiver**—Swaby Mfg. Co., Chicago, Ill.  
**Reilly**—National Foundry & Mach. Co., Louisville, Ky.  
**Reliable**—The Cleveland Faucet Co., Cleveland, O.  
**Roath**—Roath Mfg. Co., Akron, O.  
**Roots**—P. H. & F. N. Roots Co., Connersville, Ind.  
**Ross**—Ross Heater & Mfg. Co., Inc., Buffalo, N. Y.  
**Rotrex**—C. H. Wheeler Mfg. Co., Philadelphia, Pa.  
**Roturbo**—Manistee Iron Works Co., Manistee, Mich.  
**Rumsey**—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
**Schenck Mfg. & Supply Co.**, Parkers Landing, Pa.  
**Smith-Valle**—The Platt Iron Works Co., Dayton, O.  
**Southwark Foundry & Machine Co.**, Philadelphia, Pa.  
**Sparks**—McAlear Mfg. Co., Chicago, Ill.  
**Terry Steam Turbine Co.**, Hartford, Conn.  
**Thompson Mfg. Co.**, Des Moines, Iowa.  
**Trane Co.**, The, La Crosse, Wis.  
**Trimount**—Trimount Rotary Power Co., E. Dedham, Mass.  
**Union Steam Pump Co.**, Battle Creek, Mich.  
**Utility**—Utility Compressor Co., Adrian, Mich.  
**Vac**—Vac Liquid Equipment Co., Cedar Rapids, Ia.  
**Vogt Brothers Mfg. Co.**, Louisville, Ky.  
**Wagener**—Wagener Steam Pump Works, Canton, O.  
**Weinman Pump Mfg. Co.**, The, Columbus, O.  
**Wilbraham-Green Blower Co.**, Pottstown, Pa. (Rotary).  
**Wilson-Snyder Mfg. Co.**, Pittsburgh, Pa.  
**Worthington**—Worthington Pump & Machinery Corp., New York.  
**Young Pump Co.**, Michigan City, Ind.

#### PUMPS, VALVELESS

**Dourte**—Mine & Smelter Supply Co., Salt Lake City, Utah.

#### PUMPS, WATERCLOSET.

**Big Giant**—J. E. Kenney, New York.  
**Warren Steam Pump Co.**, Warren, Mass.

#### PUMPS, WATERWORKS.

**Advance**—Advance Pump & Compressor Co., Battle Creek, Mich.  
**Alberer**—Alberer Pump & Condenser Co., New York.  
**Aldrich**—Aldrich Pump Co., Allentown, Pa.  
**American**—American Steam Pump Co., Battle Creek, Mich.  
**American Well Works**, Aurora, Ill.  
**Bolcourt**—Midland Brass Works, Inc., The, Ft. Worth, Tex.  
**Bulldozer**—F. E. Myers & Bro., Ashland, Ohio.  
**Buffalo**—Buffalo Steam Pump Co., Buffalo, N. Y.  
**Cameron**—A. S. Cameron Steam Pump Works, New York.  
**Climax**—McCormick Mfg. Co., Dayton, O.  
**Cook**, A. D., Lawrenceburg, Ind.  
**Dayton-Dowd Co.**, Quincy, Ill.  
**Deming Co.**, The, Salem, O.  
**D'Ollier Centrifugal Pump & Machine Co.**, Philadelphia, Pa.

**Economy Pumping Machinery Co.**, Chicago, Ill.  
**Erle Pump & Engine Works, Inc.**, Medina, N. Y.  
**Fairbanks, Morse & Co.**, Chicago, Ill.  
**Gardner**—Gardner Governor Co., The, Quincy, Ill.  
**Goulds**—The Goulds Mfg. Co., Seneca Falls, N. Y.  
**Holly Mfg. Co.**, Buffalo, N. Y.  
**Kingsford Foundry & Machine Works**, Oswego, N. Y.  
**Lloyd**, A., Erie, Pa.  
**Luitwieller Pumping Engine Co.**, Rochester, N. Y.  
**McGowan**—John H. McGowan Co., The, Cincinnati, O.  
**Marsh**—American Steam Pump Co., Battle Creek, Mich.  
**Midwest Engine Co.**, Indianapolis, Ind.  
**Morris Machine Works**, Baldwinville, N. Y.  
**Myers**—F. E. Myers & Bro., Ashland, Ohio.  
**Mound**—Mound Tool Co., St. Louis, Mo.  
**National Transit Company Shops**, Oil City, Pa.  
**Platt Iron Works**, Dayton, Ohio.  
**Pulling**—The Columbus Steam Pump Works Co., Columbus, O.  
**Roberts Gem**—Geo. J. Roberts Co., Dayton, O.  
**Roturbo**—Manistee Iron Works Co., Manistee, Mich.  
**Rumsey**—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
**Smith-Valle**—The Platt Iron Works Co., Dayton, O.  
**Standard Pump & Engine Co.**, The, Cleveland, O.  
**Strang Engine Co.**, Chicago, Ill.  
**Terry Steam Turbine Co.**, Hartford, Conn.  
**Union Steam Pump Co.**, Battle Creek, Mich.  
**Vogt Brothers Mfg. Co.**, Louisville, Ky.  
**Wagener**—Wagener Steam Pump Works, Canton, O.  
**Worthington Pump & Machinery Co.**, New York.

#### PUMPS, WOODEN.

**Biggs**—Biggs Pump & Supply Co., Lafayette, Ind.  
**Bushnell**—Bushnell Pump Co., Bushnell, Ill.  
**Consolidated Pump Co.**, The, Toledo, O.  
**Dempster Mill Mfg. Co.**, Reatrice, Neb.  
**Standard**—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.  
**Wyckoff & Sons Co.**, A., Elmira, N. Y.

#### PUMPS, WRECKING

**Buffalo Steam Pump Co.**, Buffalo, N. Y.

#### PUNCHERS, COAL

**New Ingersoll**—Ingersoll-Rand Co., New York.  
**Pneumatic Machine Co.**, Syracuse, N. Y.  
**Weinman Pump Mfg. Co.**, Columbus, Ohio.

#### PUNCHERS, BEAM AND RAIL.

**Long & Allstatter Co.**, The, Hamilton, O.  
**Schatz Mfg. Co.**, The, Poughkeepsie, N. Y.  
**Star**—Star Forge Co., Buffalo, N. Y.  
**Watson-Stillman Co.**, The, New York, N. Y.

#### PUNCHERS, BELTING.

**Buffum Tool Co.**, Louisiana, Mo.  
**Diener Mfg. Co.**, Geo. W., Chicago, Ill.  
**Hercules**—Peck, Stow & Wilcox Co., New York, N. Y.  
**Irrington Mfg. Co.**, Irrington, N. J.  
**Johnson**, Wm., Newark, N. J.  
**Kerr & Co., Inc.**, New York, N. Y.  
**Krauter & Co., Inc.**, Newark, N. J.  
**L. X.—Manufacturers' Belt Hook Co.**, Chicago, Ill.  
**Mafteto Machine & Tool Co.**, Worcester, Mass.  
**Rogers**—E. C. Atkins Co., Indianapolis, Ind.  
**Sayre**, L. A., Company Newark, N. Y.  
**Smith & Egge Mfg. Co.**, The, Bridgeport, Conn.  
**Smith, Otis A.**, Rockfall, Conn.  
**Stimpson Co.**, Edwin B., New York, N. Y.  
**Vaughan & Bushnell Mfg. Co.**, Chicago, Ill.

#### PUNCHERS, BELT POWER.

(See "Presses, Punching, Power.")

**Buffum Tool Co.**, Louisiana, Mo.  
**Dikeman Mfg. Co.**, Norwalk, Conn.  
**Gripkut**—Krauter & Co., Inc., Newark, N. J.  
**Hendley & Whittemore Co.**, Beloit, Wis.  
**Lewthwaite**, Geo. A. Co., New York.  
**Lysholm**—Norborn Engineering Co., Philadelphia, Pa.  
**Morrill Apex**—Chas. Morrill, New York, N. Y.  
**Oswego Tool Co.**, The, Oswego, N. Y.  
**Pels**—Henry Pels Co., New York, N. Y.  
**Smith & Egge Mfg. Co.**, Bridgeport, Conn.  
**Thomas Spacing Machine Co.**, Pittsburgh, Pa. (vertical).

#### PUNCHERS, CENTER.

**Braunsdorf-Mueller Co.**, Elizabeth, N. J.  
**Brown & Sharpe Mfg. Co.**, Providence, R. I.  
**Buck Bros.**, Millbury, Mass.  
**Buffum Tool Co.**, Louisiana, Mo.  
**Bullock Mfg. Co.**, Springfield, Mass.  
**Cronk**—The Cronk & Carrier Mfg. Co., Elmira, N. Y.  
**Diener**, Geo. W., Mfg. Co., Chicago, Ill.  
**Easy Hold**—West Haven Mfg. Co., New Haven, Conn.  
**Goddell-Pratt Co.**, Greenfield, Mass.  
**Hargrave**—Cincinnati Tool Co., Cincinnati, O.  
**Heartley Machine, Variety Iron & Tool Works**, Toledo, O.



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Corn Fodder Squeezers, Rope Clamps, Etc.

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Irvington Mfg. Co., Irvington, N. J.  
Jennings, C. E., & Co., New York, N. Y.  
Johnson, Wm., Newark, N. J.  
Marcy—Marcy Tool Works, Inc., Putnam, Conn.  
Mound—Mound Tool Co., St. Louis, Mo.  
Sawyer Tool Mfg. Co., Fitchburg, Mass.  
Southington Mfg. Co., Southington, Conn.  
♦ Stanley Rule & Level Co., New Britain, Conn.  
Starrett, L. S., Co., The, Athol, Mass.  
Syracuse Twist Drill Co., Syracuse, N. Y.  
Tuck Mfg. Co., Brockton, Mass.  
Union Tool Co., Orange, Mass.  
Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
Vichek Tool Co., The, Cleveland, O.  
W. C. Carver Tool Work, Spring Valley, N. Y.  
Welch, T. F., & Co., Boston, Mass.

## PUNCHES, CONDUCTORS'

Braunsdorf-Mueller Co., Elizabeth, N. J.  
Club, Standard—Bridgeport Hardware Mfg. Co., Bridgeport, Conn.  
Grammes, L. F., & Sons, Allentown, Pa.  
Krauter & Co., Inc., Newark, N. J.  
Lewthwaite, Geo. A. Co., New York, N. Y.  
Matthews Co., Jas. H., Pittsburg, Pa.  
Sperry & Alexander Co., New York, N. Y.  
Woodman, R. Mfg. & Sup. Co., Boston, Mass.  
XI—The Hoggson & Pettis Mfg. Co., New Haven, Conn.

## PUNCHES, FOOT AND HAND

Buffalo Forge Co., Buffalo, N. Y.  
Heartley Machine, Variety Iron & Tool Works, Toledo, O.

## PUNCHES, GANG.

Ohl—Geo. A. Ohl & Co., Newark, N. J.

## PUNCHES, HAND POWER.

Badger—Rock River Machine Co., Janesville, Wis.  
Badger State—Badger State Machine Works, Beloit, Wis.  
Black Giant—Luther Mfg. Co., Inc., Olean, N. Y.  
Bourne-Fuller Co., Cleveland, O.  
♦ Buffalo Forge Co., Buffalo, N. Y.  
Buffum Tool Co., Louisiana, Mo.  
Cincinnati Iron & Steel Co., Cincinnati, O.  
Cleveland Punch & Shear Works, Cleveland, O.  
Cleveland Steel Tool Co., Cleveland, O.  
Clough, R. M., Meriden, Conn.  
Danzon Metal Works, Hagerstown, Md.  
Excelsior—Excelsior Tool & Machine Co., East St. Louis, Ill.  
Goodell-Pratt Co., Greenfield, Mass.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio  
Hendley & Whittemore Co., Beloit, Wis.  
Jiffy—Paul W. Koch & Co., Chicago, Ill.  
Lightning Portable—American Punch & Tool Co., Oregon, Ill.  
Little Blacksmith—J. F. Kidder Mfg. Co., Burlington, Vt.  
Little Giant—Excelsior Tool & Machine Co., East St. Louis, Ill.  
Long & Allstatter Co., The, Hamilton, O.  
♦ Lovejoy Tool Works, Chicago, Ill.  
Mafrato Machine & Tool Co., Worcester, Mass.  
♦ Marvel—Armstrong-Blum Mfg. Co., Chicago, Ill.  
Mayhew Steel Products, Inc., New York.  
♦ Morrill Apex—Chas. Morrill, New York, N. Y.  
Niagara Machine & Tool Works, Buffalo, N. Y.  
Parker Expansion Bolt Co., New York, N. Y.  
Pels—Henry Pels & Co., New York, N. Y.  
Plymouth—Plymouth Foundry & Machine Co., Plymouth, Wis.  
Pratt & Whitney Co., Hartford, Conn.  
Redin, Ekstrom & Co., Rockford, Ill.  
Rock River Machine Co., Janesville, Wis.  
Samson—Machine Appliance Corp., Brooklyn, N. Y.  
Schatz Mfg. Co., The, Poughkeepsie, N. Y.

♦ Union—Union Mfg. Co., New Britain, Conn.  
Victor—Armstrong Mfg. Co., Waterloo, Ia.  
Watson-Stillman Co., Aldene, N. J.  
♦ Whitman & Barnes Mfg. Co., Akron, O.  
Whitney (ball bearing)—Whitney Metal Tool Co., Inc., Rockford, Ill.  
Whitney—W. A. Whitney Mfg. Co., Rockford, Ill.  
W. & W.—Imperial Machine Co., Minneapolis, Minn.  
Young Machine & Tool Co., New York, N. Y.

## PUNCHES, HAND, SPRING AND REVOLVING.

Dosch—Smith & Egge Mfg. Co., Bridgeport, Conn.  
Johnson, Wm., Newark, N. J.  
Semco—The Smith & Egge Mfg. Co., Bridgeport, Conn.  
Stearns, E. C. & Co., Syracuse, N. Y.

## PUNCHES, HOLLOW.

Bullock Mfg. Co., Springfield, Mass.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Osborne, C. S., & Co., Newark, N. J.  
Sayre, L. A., Company, Newark, N. J.  
Syracuse Twist Drill Co., Syracuse, N. Y.  
Vaughan & Bushnell Mfg. Co., Chicago, Ill.

## PUNCHES, HORIZONTAL FLANGE.

Long & Allstatter Co., Hamilton, Ohio.

## PUNCHES, HYDRAULIC.

Dunning & Hoschert Press Co., Syracuse, N. Y.  
Dudgeon, Richard, New York, N. Y.  
Elmes, Chas. F., Engineering Works, Chicago, Ill.  
Hender's Sons, A. L., Wilmington, Del.  
Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
Niles-Bement-Pond Co., New York, N. Y.  
Pels, Henry, & Co., New York, N. Y.  
Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
Watson-Stillman Co., The, Aldene, N. J.  
Wood & Co., R. D., Philadelphia, Pa.

## PUNCHES, MULTIPLE.

Badger State—Badger State Machine Works, Beloit, Wis.  
Cincinnati Punch & Shear Co., Cincinnati, O.  
Long & Allstatter Co., The, Hamilton, O.  
Rock River Machine Co., Janesville, Wis.  
Thomas Spacing Machine Co., Pittsburgh, Pa. (Vertical.)  
Williams, White & Co., Moline, Ill.

## PUNCHES, PNEUMATIC.


Baird—Baird Pneumatic Tool Co., Kansas City, Mo.  
Hanna—Hanna Engineering Wks., Chicago, Ill.  
Shoomb, F. F., & Co., Wilmington, Del.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Trane Co., The, La Crosse, Wis.

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**PUNCHES, PRICK.**

Buck Bros., Millbury, Mass.  
Cincinnati Tool Co., Cincinnati, O.  
Jennings, C. E., & Co., New York, N. Y.  
Marcy—Marcy Tool Works, Inc., Putnam, Conn.

**PUNCHES, RAILROAD TRACK.**

Klein-Logan Co., The, Pittsburgh, Pa.  
Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
Tuck Mfg. Co., Brockton, Mass.  
Verona Tool Works, Pittsburgh, Pa.

**PUNCHES, SADDLERS'.**

Johnson, Wm., Newark, N. J.  
Turret-Smith & Egge Mfg. Co., Bridgeport, Conn.

**PUNCHES, SAW BLADE.**

Dikeman Mfg. Co., Norwalk, Conn.

**PUNCHES, SCREW.**

Badger State Machine Works, Beloit, Wis.  
Bullock, C. K., Co., Philadelphia, Pa.  
Dudgeon, Richard, New York, N. Y.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.  
Henderer's Sons, A. L., Wilmington, Del.  
♦ Lovejoy Tool Works, Chicago, Ill.  
Oswego Tool Co., Oswego, N. Y.  
Rock River Machine Co., Janesville, Wis.  
Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
Scully Steel & Iron Co., Chicago, Ill.  
Watson-Stillman Co., The, Aldene, N. J.

**PUNCHES, SCREW, BALL BEARING.**

Whitney Latest—W. A. Whitney Mfg. Co., Rockford, Ill.

**PUNCHES AND SHEARS, COMBINED.**

Badger State Machine Works, Beloit, Wis.  
Heartley Machine, Variety Iron & Tool Works, Toledo, O.  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite, Geo. A. Co., New York, N. Y.  
Perkins Machine Co., Warren, Mass.

**PUNCHES, SOLID.**

American Die & Tool Co., Reading, Pa.  
Anderson Tool & Supply Co., Detroit, Mich.  
Badger State—Badger State Machine Works, Beloit, Wis.  
Bemis & Call Hardware & Tool Co., Springfield, Mass.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Buck Bros., Millbury, Mass.  
Buffum Tool Co., Louisiana, Mo.  
Challenge—Harrold Tool & Forge Co., Columbiana, O.  
Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.  
C. S. Co.—Chapin-Stephens Co., Pine Meadow, Conn.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Dikeman Mfg. Co., Norwalk, Conn.  
Eagle Claw—Mechanics Tool Co., Rockford, Ill.  
Gondell-Pratt Co., Greenfield, Mass.  
Griptite—Kraeuter & Co., Inc., Newark, N. J.  
Handy—Danzon Metal Works, Hagerstown, Md.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
H. J. H.—Harrold Tool & Forge Co., Columbiana, O.  
Johnson, Wm., Newark, N. J.  
Marcy—Marcy Tool Works, Inc., Putnam, Conn.  
♦ Marvel—Armstrong-Blum Mfg. Co., Chicago, Ill.  
National Tool Co., Brooklyn, N. Y.  
New Process—Geo. F. Marchant Co., Chicago, Ill.  
Paragon Tool Co., Seattle, Wash.  
Peck, Stow & Wilcox Co., New York, N. Y.  
Peck—West Haven Mfg. Co., New Haven, Conn.  
Rock River Machine Co., Janesville, Wis.  
S. & I. Company, Springfield, Mass.  
Sellers & Co., Inc., Wm., Philadelphia, Pa.  
Sharpen Ezy—The H. D. Smith & Co., Plantsville, Conn.  
Southington Mfg. Co., The, Southington, Conn.  
Tuck Mfg. Co., Brockton, Mass.  
Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
Vichek Tool Co., The, Cleveland, O.  
W. C. Carver Tool Works, Spring Valley, N. J.

**PURIFIERS, BOILER FEED WATER.**

Scalfe, Wm. B. & Sons Co., Pittsburgh, Pa.

**PURIFIERS, GAS.**

Cruse-Kemper Co., Ambler, Pa.  
Isabell-Porter Co., Newark, N. J.  
Simon, Buhler & Baumann, Inc., New York, N. Y.  
Smith—Smith Gas Power Co., Dayton, O.  
Western Gas Construction Co., Fort Wayne, Ind.

**PURIFIERS, OIL.**

(See "Filters, Oil.")

**PURIFIERS, WATER**

Diamond, Katak—Swan & Finch Co., New York.

**PUSHERS, COKE**

Morgan Engineering Co., Alliance, Ohio.

**PUSHERS, PIPE, FOR LAYING UNDERGROUND PIPING.**

Clark, H. W., Co., Mattoon, Ill.  
Easy—The Easy Mfg. Co., David City, Neb.  
Giant—Giant Mfg. Co., Council Bluffs, Ia.  
Giant—Horace A. Brown, Ottumwa, Ia.

**PYROMETERS.**

Bristol's—Bristol Co., The, Waterbury, Conn.  
Brown's Patent—Star Brass Mfg. Co., Boston, Mass.  
Brown—Brown Instrument Co. (Portable and Radiation)—Philadelphia, Pa.  
Cleveland—The Cleveland Instrument Co., Cleveland, Ohio.  
Foxboro Co., Inc., The, Foxboro, Mass.  
Heatmeter—Brown Instrument Co., Philadelphia, Pa.  
Heraeus—Charles Engelhart, New York, N. Y.  
Hoskins—Hoskins Mfg. Co., Detroit, Mich.  
I-Rite—Gibb Instrument Co., Detroit, Mich.  
Le Chatelier—Wilson-Maeulen Co., New York, N. Y.  
Leeds & Northrup Co., The, Philadelphia, Pa.  
Monopivot (indicating)—Wilson Maeulen Co., New York, N. Y.  
National Gauge Co., Brooklyn, N. Y.  
Northrup—Pyroelectric Instrument Co., Trenton, N. J.  
Pneumatic—Uehling Instrument Co., Passaic, N. J.  
Price—Price Electric Co., Cleveland, O.  
Pyroscopic—Shore Instrument & Mfg. Co., New York, N. Y.  
Queen-Gray Co., Inc., Philadelphia, Pa.  
Schaeffer & Rudenberg Mfg. Co., The, Brooklyn, N. Y.  
Scimatco—Scientific Materials Co., Pittsburgh, Pa.  
Scott—C. U. Scott, Davenport, Ia.  
Shaw's—Quimby Engineering Co., Philadelphia, Pa.  
Stupakoff Laboratories, Pittsburgh, Pa.  
Superheater Co., The, New York, N. Y.  
Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
Tapalog (recording)—Wilson-Maeulen Co., New York, N. Y.  
Taylor-Cambridge—Taylor Instruments Companies, Rochester, N. Y.  
Taylor Instrument Co., Rochester, N. Y.  
Twinko—Thwing Instrument Co., Philadelphia, Pa.  
Uehling—Uehling Instrument Co., New York, N. Y. (pneumatic).  
Zaubitz, August, New York, N. Y.

**PYROMETER THERMOCOUPLES.**

Pyod—Wilson-Maeulen Co., New York, N. Y. (base metal.)

**QUILLS OR HOLLOW SHAFTS (TRANSMISSION).**

American Tool & Machine Co., Boston, Mass.  
♦ Jeffrey Mfg. Co., Columbus, O.  
♦ Wood's Sons Co., T. B., Chambersburg, Pa.

**RACKS, HAND SAW.**

Edge & Co., Frank, Grand Rapids, Mich.

**RACKS, BARREL, STORAGE.**

Economy Engineering Co., Chicago, Ill.

**RACKS, BELTING, FOR SUPPLY HOUSES.**

Graton & Knight Mfg. Co., Worcester, Mass.

**RACKS OR CARRIERS, SHEET PACKING.**

Crush, F. A., & Co., Louisville, Ky.  
Johnson, Henry, Co., The, Jersey City, N. J.

**RACKS, CORE**

♦ Ohio Body & Blower Co., Cleveland, Ohio.

**RACKS, HARDWARE STORE.**

Acme Level & Mfg. Co., The, Archbold, O.

**RACKS, HOSE.**

Angle Iron—Wirt & Knox Mfg. Co., Philadelphia, Pa.  
Atlas—American Fire Apparatus Co., New York.  
♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Bowes—W. D. Allen Mfg. Co., Chicago, Ill.  
Cabinet—Bowers Rubber Works, San Francisco, Cal.  
Chicago—W. D. Allen Mfg. Co., Chicago, Ill.  
C. & G.—Cliff & Guilbert Co., New York, N. Y.  
Dewey—W. D. Allen Mfg. Co., Chicago, Ill.  
Eclipse—Wirt & Knox Mfg. Co., Philadelphia, Pa.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
E-Z—Chas. Nuhning & Bro., Cincinnati, O.  
Hayward—Hayward & Co., S. F., New York, N. Y.  
Howard—H. J. M. Howard Mfg. Co., Washington, D. C.  
Hump—Wirt & Knox Mfg. Co., Philadelphia, Pa.  
Jiffy—The Jiffy Fire Hose Rack Co., New York, N. Y.  
Larkin—Larkin Mfg. Co., Dayton, O.  
Lightning—John Simmons Co., New York (pin).  
Lightning—Lightning Hose Rack Co., New York, N. Y.

- New Britain Machine Co., The, New Britain, Conn.  
 Nuhning—Home Rubber Co., Trenton, N. J.  
 Peerless—H. J. M. Howard Mfg. Co., Washington, D. C.  
 Queen—Harker Mfg. Co., Cincinnati, O.  
 Regal—Cliff & Guibert Co., New York.  
 Royal—Style V.—Wirt & Knox Mfg. Co., Philadelphia, Pa.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 Seagrave—The Seagrave Co., Columbus, O.  
 Senate—Niedner's Sons Co., Chas., Malden, Mass.  
 Sherman—E. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Waterous Engine Works Co., St. Paul, Minn.  
 Wirt's National—Wirt & Knox Mfg. Co., Philadelphia, Pa.  
 Yale—W. D. Allen Mfg. Co., Chicago, Ill.

**RACKS, MACHINE.**

(See also "Gears.")

- Boston Gear Works, Norfolk Downs, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Earle Gear & Machine Co., Philadelphia, Pa.  
 Fellows Gear Shaper Co., Springfield, Vt.  
 Flather Mfg. Co., E. J., Nashua, N. H.  
 Ganschow, Wm., Co., Chicago, Ill.  
 Horsburgh & Scott Co., Cleveland, O.  
 James, D. O., Mfg. Co., Chicago, Ill.  
 LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
 Moltrup Steel Products Co., Beaver Falls, Pa.  
 Newark Gear Cutting Mch. Co., Newark, N. J.  
 Nuttall Co., R. D., Pittsburgh, Pa.  
 Philadelphia Gear Works, Inc., Philadelphia, Pa.  
 Simonds Mfg. Co., Pittsburgh, Pa.  
 Standard Gauge Steel Co., Beaver Falls, Pa.  
 Taylor-Wilson Mfg. Co., Philadelphia, Pa.  
 Welch, T. F., & Co., Boston, Mass.

**RACKS, FOR PIPE, SHAPING, STOCK, ETC.**

- Brown Engineering Co., Reading, Pa.  
 Builders Iron Foundry, Providence, R. I.  
 Champion—Western Tool & Mfg. Co., Springfield, O.  
 Lyon Metallic Mfg. Co., Aurora, Ill.  
 Kent Machine Co., Kent, Ohio.  
 Manufacturing Equipment & Eng. Co., Framingham, Mass.  
 New Britain Machine Co., New Britain, Conn.  
 Yohe, Wm. S., Supply Co., Canton, O.

**RACKS, SOLDERING IRON, ELECTRIC.**

- Cutler-Hammer Mfg. Co., Milwaukee, Wis.

**RACKS, STEEL, FOR SCREW MACHINES.**

- Brown Engineering Co., Reading, Pa.  
 Champion—Western Tool & Mfg. Co., Springfield, O.

**RACKS AND STANDS, TOOL.**

- Barshal Company, Inc., The, Cleveland, O.  
 Champion—Western Tool & Mfg. Co., Springfield, O.  
 Chicago Wire Chain Co., The, Chicago, Ill.  
 Cleveland Wire Spring Co., The, Cleveland, O.  
 Driver, C. H., & Kerr Co., Racine, Wis.  
 Forc—Peter Forg, Somerville, Mass.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 Manufacturing Equip. & Eng. Co., Boston, Mass.  
 New Britain—New Britain Machine Co., New Britain, Conn.  
 Ohio Mfg. Co., The, Painesville, O.  
 Terrell's Equipment Co., Grand Rapids, Mich.  
 The Wellston Mfg. Co., Wellston, O.

**RACKS, TOWEL.**

(See, also, "Fittings, Bath Room.")

- Atlas—Atlas Radiator Pedestal Co., Norwich, Conn.  
 Bone China—The Trenton Potteries Co., Trenton, N. J.  
 Central Specialty Mfg. Co., Chicago, Ill.  
 Durand Steel Locker Co., Chicago, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Phillips—Garrison Brass & Machine Co., New York.  
 Newman Mfg. Co., The, Cincinnati, O.  
 S. M. Co.—Searls Mfg. Co., Newark, N. J.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Trio Mfg. Co., Cleveland, O.  
 Wire Goods Co., The, Worcester, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**RACKS, TRASH.**

- Trump—Trump Mfg. Co., Springfield, O.

**RADIATORS, DIRECT-INDIRECT.**

- A. B. C.—American Blower Co., Detroit, Mich.  
 American Radiator Co., Chicago, Ill.  
 Reading Heater & Supply Co., Reading, Pa.

**RADIATION UNITS, ACID PROOF.**

- Duriron—Duriron Co., Inc., The, Dayton, O.

**RADIATORS, ELECTRIC.**

(See also "Heaters, Electric.")

- American Beauty—American Electrical Heater Co., Detroit, Mich.  
 Diamond Electric Co., Binghamton, N. Y.  
 Edison Electric Appliance Co., Inc., Chicago, Ill.  
 Electro Steam Radiator Co., Chicago, Ill. (Steam).  
 General Electric Co., Schenectady, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 McKenney & Waterbury Co., Boston, Mass.  
 Simplex Electric Heating Co., Cambridge, Mass.  
 Western Electric Co., Chicago, Ill.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**RADIATORS, GAS.**

(See also "Heaters, Gas.")

- Eriez—Eriez Stove & Mfg. Co., Erie, Pa.  
 Fire King—A. Weiskittel & Son Co., Baltimore, Md.  
 Hawks—Hugo Mfg. Co., Duluth, Minn.  
 Franklin—Trolley Supply Co., Massillon, O.  
 Keystone—Wilson & Daum Co., Pittsburgh, Pa.  
 Majestic—Wilson & Daum Co., Pittsburgh, Pa.  
 Tirrill—Tirrill Gas Machine Lighting Co., New York.  
 Wolff, A. H., Gas Radiator Co., New York.

**RADIATORS, HOT BLAST**

- Bayley Thermo-Unit—Bayley Mfg. Co., Milwaukee, Wis.  
 Vento—American Radiator Co., Chicago, Ill.

**RADIATORS, HOT WATER, GAS HEATED.**

- Iowa—Iowa Radiator Co., Cedar Rapids, Ia.  
 Perfection—Wm. Kane Mfg. Co., Philadelphia, Pa.

**RADIATORS, INDIRECT.**

- A. B. C.—American Blower Co., Detroit, Mich.  
 Aerial—H. B. Smith Co., Westfield, Mass.  
 Bedford—National Radiator Co., Johnstown, Pa.  
 Champion—U. S. Radiator Corp., Detroit, Mich.  
 Concord—Union Radiator Co., Johnstown, Pa.  
 Excelsior, Excelsior Jr.—American Radiator Co., Chicago, Ill.  
 Florentine, Triton—U. S. Radiator Corp., Detroit, Mich.  
 Gold Pin—The H. B. Smith Co., Westfield, Mass.  
 Gurney—Gurney Heater Mfg. Co., Boston, Mass.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Kewanee—Kellogg-Mackay Co., Chicago, Ill.  
 Perfect Pin—United States Radiator Corp., Detroit, Mich.  
 Pin—U. S. Radiator Corp., Detroit, Mich.  
 Premo—National Radiator Co., Johnstown, Pa.  
 School Pin—The H. B. Smith Co., Westfield, Mass.  
 Smith—H. B. Smith Co., Westfield, Mass.  
 Somerset—National Radiator Co., Johnstown, Pa.  
 Vento—American Radiator Co., Chicago, Ill.  
 Zellweger—J. Zellweger & Sons, St. Louis, Mo.

**RADIATORS, SPECIAL DESIGNS.**

- Florentine, Triton—U. S. Radiator Corp., Detroit, Mich.  
 Gurney—Gurney Heater Mfg. Co., Boston, Mass.  
 Improved Appliance Co., Brooklyn, N. Y.

**RADIATORS, STEAM, GAS HEATED.**

- Advanced—John Simmons Co., New York, N. Y.  
 Franklin—The Trolley Supply Co. (Gas Appliance Dept.), Massillon, O.  
 Gas-steam—Robert Watt Mfg. Co., Philadelphia, Pa.  
 Gasteam—James B. Clow & Sons, Chicago, Ill.  
 Hugo Mfg. Co., Duluth, Minn.  
 Mead—The Mead Gas Heater Co., Delawanna, N. J.  
 Wolff—A. H. Wolff Gas Radiator Co., New York.

**RADIATORS, STEAM, HIGH PRESSURE.**

- Nason—Nason Mfg. Co., New York, N. Y.  
 National Tube Co., Pittsburgh, Pa.  
 Walworth Mfg. Co., Boston, Mass.

**RADIATORS, STEAM AND HOT WATER.**

- Areal Sanitary Ventilating—American—American Radiator Co., Chicago, Ill.  
 Andrews Heating Co., Minneapolis, Minn.  
 Arcola, Norwall, Syphon, Aird—American Radiator Co., Chicago, Ill.  
 Beaver—The Pressed Radiator Co. of America, Pittsburgh, Pa.  
 Bi-Loop—Monitor Bi-Loop Radiator Co., Lancaster, Pa.  
 Bon Ton—South Park Fdy. & Mach. Co., St. Paul.  
 Central—Central Radiator Co., Lansdale, Pa.  
 Chandler—Chandler Heater Co., Cedar Rapids, Ia.  
 Concord—Union Radiator Co., Johnstown, Pa.  
 Corinth—Kewanee Boiler Co., Kewanee, Ill.  
 Duct—Gurney Heater Mfg. Co., Boston, Mass.  
 Duluth—Marshall-Wells Hardware Co., Duluth, Minn.  
 Duquesne—The Pressed Radiator Co. of America, Pittsburgh, Pa.

Eureka—The Pressed Radiator Co. of America, Pittsburgh, Pa.  
 Federal Radiator Co., Zanesville, O.  
 Florentine—U. S. Radiator Corp., Detroit, Mich.  
 Grecian—U. S. Radiator Corp., Detroit, Mich.  
 Gurney Heater Mfg. Co., Boston, Mass.  
 Hecla—The Pressed Radiator Co. of America, Pittsburgh, Pa.  
 Interchange—The J. H. McLain Co., Canton, O.  
 Iowa—Chandler Heater Co., Cedar Rapids, Iowa.  
 Kansas City Radiator Co., The, Kansas City, Mo.  
 Kewanee—Kewanee Boiler Co., Kewanee, Ill.  
 Kewanee-Acme—Kellogg-Mackay Co., Chicago, Ill.  
 Knickerbocker—Mackay Mfg. Co., Newark, N. J.  
 Koran—Standard Heater Co., Williamsport, Pa.  
 Logan—Logansport Radiator Equipment Co., Logansport, Ind.  
 Louraine—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
 Mahoney—Mahoney Boiler & Radiator Co., Troy, N. Y.  
 Manhattan—Mackay Mfg. Co., Newark, N. J.  
 McLain—Well-McLain Co., Michigan City, Ind.  
 Minnesota—Northwestern Radiator Corp., Sauk Center, Minn.  
 Minnesota Radiator Co., West Duluth, Minn.  
 Monitor Bi-Loop—Monitor Bi-Loop Radiator Co., Lancaster, Pa.  
 Morning Glory—South Park Foundry & Machine Co., St. Paul, Minn.  
 Mott Iron Works, J. L., Trenton, N. J.  
 National Radiator Co., Johnstown, Pa.  
 New York—Hart & Crouse Co., Utica, N. Y.  
 New York—New York Radiator Co., Utica, N. Y.  
 Niagara—Niagara Radiator & Boiler Co., North Tonawanda, N. Y.  
 ♦ Niagara, Economy, Coll.—American District Steam Co., North Tonawanda, N. Y.  
 Norka—Standard Heater Co., Williamsport, Pa.  
 Peerless, Peerless Wall, Corto—American Radiator Co., Chicago.  
 Perfection—Win. Kane Mfg. Co., Philadelphia, Pa.  
 Phelps—Phelps Bros. Co., New York, N. Y.  
 Pierce—Pierce, Butler & Pierce Mfg. Co., New York, N. Y.  
 Presto—Pressed Metal Radiator Co., Pittsburgh, Pa.  
 Princess—H. B. Smith Co., Westfield, Mass.  
 Regal—The Fuller-Warren Co., Milwaukee, Wis.  
 Richmond Radiator Co., New York.  
 Rising Sun—South Park Foundry & Machine Co., St. Paul.  
 Rococo—American Radiator Co., Chicago.  
 Seneca—The J. H. McLain Co., Canton, O.  
 SESCO—Sanitary Enameling & Specialty Co., New Kensington, Pa.  
 Slow Buena—James B. Clow & Sons, Chicago, Ill.  
 Sovereign—The H. B. Smith Co., Westfield, Mass.  
 Spiral Boiler & Radiator Co., St. Paul, Minn.  
 Sterling—Walker Mfg. & Supply Co., Detroit, Mich.  
 Thatcher—Thatcher Furnace Co., New York, N. Y.  
 Tremont—Gurney Heater Mfg. Co., Boston, Mass.  
 Triton—United States Radiator Corp., Detroit, Mich.  
 Vict—Rhodes Bros. Co., Collingdale, Pa.  
 Walker—Kansas City Radiator Co., The, Kansas City, Mo.  
 Whiteacre Boiler Co., Wellsville, O.

#### RADIATORS, WALL.

Central—Central Radiator Co., Lansdale, Pa.  
 Concord—Union Radiator Co., Johnstown, Pa.  
 Florentine, Triton—U. S. Radiator Corp., Detroit, Mich.  
 Fowler & Wolfe Mfg. Co., Philadelphia, Pa.  
 Gurney—Gurney Heater Mfg. Co., Boston, Mass.  
 I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.  
 Kinnear Pressed Radiators—The Pressed Radiator Co. of America, Pittsburgh, Pa.  
 Louraine—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 National—National Radiator Co., Johnstown, Pa.  
 Pierce—Pierce, Butler & Pierce Mfg. Co., New York, N. Y.  
 Thatcher—Thatcher Furnace Co., New York, N. Y.  
 X-Ray—The H. B. Smith Co., Westfield, Mass.

#### RADIATORS, WROUGHT OR STAGGERED TUBE.

♦ Walworth Mfg. Co., Boston, Mass.

#### RADIATORS, WROUGHT STEEL & WELDED TUBE.

♦ Walworth Mfg. Co., Boston, Mass.

#### RAILINGS AND FITTINGS, BRASS.

Allen Fire Dept Supply Co., Providence, R. I.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Buffalo—Buffalo Wire Works Co., Buffalo, N. Y.  
 Columbus Brass Co., Columbus, O.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Faultless—Ryan & Co., J. J., Chicago, Ill.  
 Fries & Co., Buffalo, N. Y.  
 Gilbert, A. & Sons Brass Foundry Co., St. Louis, Mo.  
 Hamilton Brass Works, John, Bridgeport, Conn.  
 ♦ Imperial Brass Mfg. Co., The, Chicago, Ill.

♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lehnert & Co., New York, N. Y.  
 McKenna—McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.  
 McNabb & Harlin Mfg. Co., New York, N. Y.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Newbury Mfg. Co., Monroe, N.  
 Newman Mfg. Co., The, New Haven, Conn.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perkes Co., Chas., Philadelphia, Pa.  
 Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 ♦ Sherwood Mfg. Co., Buffalo, N. Y.  
 Speakman Co., Wilmington, Del.  
 Taylor, Geo., Brass & Bronze, Inc., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wright Wire Co., Worcester, Mass.

#### RAILINGS, IRON & STEEL.

Clark Co., The, West Newton, Pa.  
 Standard Fitting & Mfg. Co., West Newton, Pa.  
 Tyler, W. S., Co., The, Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### RAILINGS AND FITTINGS, MALLEABLE.

(See also "Fittings, Railing.")

Clark Co., The, West Newton, Pa.  
 Eagle Pipe Supply Co., Inc., New York, N. Y.  
 ♦ Kelly & Jones Co., Greensburg, Pa.  
 Smith, E. P., Wire & Iron Works, Chicago, Ill.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### RAILS, HAND, BATH ROOM.

(See also "Fittings, Bath Room.")

Art Brass Co., New York, N. Y.  
 Bay Ridge Specialty Co., Inc., Trenton, N. J.  
 Church, C. F., Mfg. Co., Holyoke, Mass.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Newman Mfg. Co., The, Cincinnati, O.  
 Omala—The Galard Co., New York, N. Y.  
 Richardson, Edro., Brass Co., Baltimore, Md.  
 Simco, Silcock—Miller Co., The, South Orange, Mass. (white).  
 S. M. Co.—Searis Mfg. Co., Newark, N. J.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa.

#### RAILS, MOTOR ELECTRIC.

Birkie Machine Works, Chicago, Ill.

#### RAILS AND WARMERS, FOOT, RADIATOR.

Atlas—Atlas Radiator Pedestal Co., Norwich, Conn.  
 Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 Capitol—U. S. Radiator Corp., Detroit, Mich.  
 Comfort—W. C. Ovenden, West Boylston, Mass.  
 Ithaca—Radiator Footwarmer Co., Ithaca, N. Y.

#### RAILWAYS, INDUSTRIAL.

(See also "Locomotives, Industrial.")

A. C. Co.—Arnold-Creager Co., The, New London, Ohio.  
 Gregg Co., Ltd., Hackensack, N. J.  
 Hunt Co., C. W., New York, N. Y.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Koppel Industrial Car & Equipment Co., Koppel, Pa.  
 Lackawanna Steel Co., Lackawanna, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 Sackett—Chicago—Sackett Screen & Chute Co., Chicago, Ill.  
 Treadwell Engineering Co., New York.  
 Wiener, Ernst Co., New York, N. Y.

#### RAMMERS, JOLT, PNEUMATIC.

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Canton—Canton Pneumatic Tool Co., Canton, O.  
 Cleveland—Cleveland Pneumatic Tool Co., Cleveland, Ohio.  
 Crown—Ingersoll-Rand Co., New York, N. Y.  
 Independent Pneumatic Tool Co., Chicago, Ill.  
 Ingersoll-Rand Co., New York.  
 ♦ Keller—Chicago Pneumatic Tool Co., New York, N. Y.  
 Mumford—Hanna Engineering Wks., Chicago, Ill.  
 Oldham, Geo. & Son Co., Philadelphia, Pa.  
 Osborn Mfg. Co., Cleveland, O.  
 Pittsburg Pneumatic Co., Canton, O.

#### RAMMERS, SAND, BENCH.

Novelty Turning Co., Norway, Me.  
 Piqua Handle & Mfg. Co., Piqua, Ohio.

#### RAMS, BATTERING.

Hayward—S. F. Hayward Co., New York, N. Y.

#### RAMS, HYDRAULIC.

Barnes Mfg. Co., The, Mansfield, O.  
 Crestline—The Crestline Mfg. Co., Crestline, O.  
 Douglas—W. & B. Douglas, Middletown, Conn.

- Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 ♦ Hydraram—The Deming Co., Salem, O.  
 Improved—The Humphreys Mfg. Co., Mansfield, O.  
 Niagara—Niagara Hydraulic Engine Co., Chester, Pa.  
 Rife—Rife Engine Co., New York, N. Y.  
 Rumsey—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Victory—The Deming Co., Salem, O.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.

**RANGES, GAS.**

(See "Stoves and Ranges, Gas.")

- Vulcan—William M. Crane Co., New York, N. Y.  
 Weiskittel, A., & Son Co., Baltimore, Md.

**RANGES, URINAL.**

- Angora, Belton, Clifton, Fernwood—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Ebinger—The D. A. Ebinger Mfg. Co., Columbus, O.

**RANGES, WATER CLOSET.**

- Alberene—Alberene Stone Co., New York, N. Y.  
 American Warming & Ventilating Co., Elmira, N. Y.  
 Brighton Open—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Crane Co., Chicago, Ill.  
 Crescent—Cahill-Swift Mfg. Co., St. Louis, Mo.  
 Ebinger—The D. A. Ebinger Mfg. Co., Columbus, O.  
 Edwardsville Brass Works, Edwardsville, Ill.  
 Em-Ess Persons—The Meyer-Sniffen Co., New York.  
 Federal-Huber Co., Chicago, Ill.  
 Glenside—Haines, Jones & Cadbury Co., Philadelphia.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hyde, Clinton, Albany, N. Y.  
 Jenkins Mfg. Co., New York, N. Y.  
 Lansdale—Haines, Jones & Cadbury Co., Philadelphia.  
 Penelyn—Haines, Jones & Cadbury Co., Philadelphia.  
 Privus, Automatic, Colus—The J. L. Mott Iron Works, Trenton, N. J.  
 Somerton—Haines, Jones & Cadbury Co., Philadelphia.  
 Syphon Eduction—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Telford—Haines, Jones & Cadbury Co., Philadelphia.

**RAPPERS AND TAMPERS, FOUNDRY.**

- ♦ Champion—Western Tool & Mfg. Co., Springfield, O.

**RATCHETS, MINING**

- Nixon—Nixon Mining Drill Co., Chattanooga, Tenn.

**RATCHETS, PACKER.**

- ♦ Lovejoy Tool Works, Chicago, Ill.

**RATCHETS AND RATCHET DRILLS.**

(See also "Wrenches, Ratchet.")

- Anderson Forge & Machine Co., Detroit, Mich.  
 ♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
 ♦ Billings & Spencer Co., The, Hartford, Conn.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Carver Tool Works, Spring Valley, N. Y.  
 Cleveland Twist Drill Co., Cleveland, O.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 ♦ Giant—Keystone Mfg. Co., The, Buffalo, N. Y.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Greene, Tweed & Co., New York, N. Y.  
 ♦ Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 ♦ Keystone—The Keystone Mfg. Co., Buffalo, N. Y.  
 Lowell Wrench Co., Worcester, Mass.  
 Miller Wrench Co., Syracuse, N. Y.  
 Millers Falls Co., New York, N. Y.  
 ♦ Monarch—The Keystone Mfg. Co., Buffalo, N. Y.  
 New Process Twist Drill Co., Taunton, Mass.  
 ♦ Ohlen & Sons Saw Mfg. Co., The, James, Columbus, O.  
 Oswego—The Oswego Tool Co., Oswego, N. Y.  
 ♦ Packer—King, A. R., Mfg. Co., Kingston, N. Y.  
 ♦ Packer—Lovejoy—Lovejoy Tool Works, Chicago, Ill.  
 Packer—The Billings & Spencer Co., Hartford, Conn.  
 Packer—The Ashcroft Mfg. Co., New York, N. Y.  
 ♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Pittsburgh Gage & Supply Co., Pittsburgh.  
 Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 Railroad—The Billings & Spencer Co., Hartford, Conn.  
 Renshaw—The Pratt & Whitney Co., Hartford, Conn.  
 Scully Steel & Iron Co., Chicago, Ill.  
 ♦ Service—Lowell Wrench Co., Worcester, Mass.  
 ♦ Standard Tool Co., Cleveland, O.  
 Stevenson Gear Co., Indianapolis, Ind.  
 Union Elevator & Machine Co., Chicago, Ill.  
 ♦ Weston—The Keystone Mfg. Co., Buffalo, N. Y.

**RATCHET, TRACK.**

- ♦ Giant—Keystone Mfg. Co., Buffalo, N. Y.

**RATTLERS, FLUE**

- Baird Pneumatic Tool Co., Kansas City, Mo.  
 Draper Mfg. Co., Port Huron, Mich.

**REAMERS, ADJUSTABLE BLADE.**

- Acme—Schellenbach-Hunt Tool Co., Cincinnati, O.  
 Advance Tool Co., Cincinnati, O.

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- Arnold—H. H. Arnold Co., Inc., Rockland, Mass.  
 Cashman—Cashman Tool Co., Waynesboro, Pa.  
 Clough, R. M., Meriden, Conn.  
 Critchley, Genuine—Chadwick & Trefethen, Portsmouth, N. H.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 Gisholt Machine Co., Madison, Wis.  
 Hack—American Machine Tool Engineering Works, Chicago, Ill.  
 ♦ Ideal—The McCrosky Tool Corp., Meadville, Pa.  
 ♦ Kelly—The Kelly Reamer Co., Cleveland, O.  
 Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.  
 ♦ McCrosky—McCrosky Tool Corp., Meadville, Pa.  
 Mergenthaler Co., The, Baltimore, Md.  
 Modern Critchley Type—The P. & G. Tool Co., New York, N. Y.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 National Tool Co., The, Cleveland, O.  
 ♦ Quickset—Cleveland Twist Drill Co., The, Cleveland, O.  
 ♦ Paradox—The Cleveland Twist Drill Co., Cleveland, O.  
 Pratt & Whitney Co., Hartford, Conn.  
 Red Band Critchley Type—H. A. Shunk, Inc., New York.  
 Rogers Works, The John M., Gloucester City, N. J.  
 Schellenbach-Hunt Tool Co., The, Cincinnati, O.  
 Simplex High Speed—Simplex Tool Supply Co., Boston, Mass.  
 ♦ Super—McCrosky Tool Corp., Meadville, Pa.  
 The National Tool Co., Cleveland, O.  
 Windau Tool Co., Cleveland, Ohio.

**REAMERS, BIBB SEAT.**

- Ajax—Ajax Mfg. Co., Pittsburgh, Pa.  
 ♦ Bay State Tap & Die Co., Mansfield, Mass.  
 B. B.—B. B. Specialty Co., Pittsburgh, Pa.  
 Durst Mfg. Co., The, New York, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Lord, Penna. and Universal—C. H. Yonts Co., Meadville, Pa.  
 Sterling—Adam A. Long, Rochester, N. Y.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.  
 Woodward-Wanger Co., Philadelphia, Pa.

**REAMERS, BIT BRACE AND HAND.**

- Advance Tool Co., Cincinnati, O.  
 Alvord Reamer & Tool Co., Millersburg, Pa.  
 American Tap & Die Co., Greenfield, Mass.  
 Buckeye Twist Drill Co., Alliance, O.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 Clough, R. M., Tolland, Conn.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 ♦ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Hercules—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Kelly Reamer Co., Cleveland, O.  
 ♦ Lincoln Twist Drill Co., Taunton, Mass.  
 ♦ McCrosky Tool Corp., Meadville, Pa.  
 National Tool Co., The, Cleveland, O.  
 Morse Twist Drill Machine Co., New Bedford, Mass.  
 Polk & Son, A. J., Millersburg, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 S. & I. Company, The, Springfield, Mass.  
 Shield Brand—The Standard Tool Co., Cleveland, O.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, BRIDGE.**

- Ampco—American Machine Products Co., Detroit, Mich.  
 Alvord Reamer & Tool Co., Millersburg, Pa.  
 Buckeye Twist Drill Co., Alliance, O.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 Celfor—Celfor Tool Co., Buchanan, Mich.  
 Chapin-Skelton Corp., Syracuse, N. Y.  
 ♦ Cleveland Twist Drill Co., Cleveland, O.  
 ♦ Detroit Twist Drill Co., Detroit, Mich.  
 ♦ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Latrobe—Latrobe Tool Co., Latrobe, Pa.  
 McKenna—McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.  
 Novo—Boker, H., & Co., Inc., New York, N. Y.  
 Polk, A. J., & Son, Millersburg, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 Rich Tool Co., Chicago, Ill.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, CENTER.**

- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.
- ◆ Cleveland Twist Drill Co., Cleveland, O.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- ◆ Shield Brand—Standard Tool Co., Cleveland, O.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, CHUCKING.**

- Alvord Reamer & Tool Co., Millersburg, Pa.
- American Twist Drill Co., Detroit, Mich.
- Blancke Co., Inc., L. C., New York, N. Y.
- Brubaker, W. L., & Bros., Millersburg, Pa.
- Buckeye Twist Drill Co., Alliance, O.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Celfor—Celfor Tool Co., Buchanan, Mich.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- Gale-Sawyer Co., The, Boston, Mass.
- Gammons—The Gammons-Holman Co., Manchester, Conn.
- ◆ Green River—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hjorth—Hjorth Lathe & Tool Co., Boston, Mass.
- Hoenschel Forged Twist Drill & Tool Co., Detroit, Mich.
- Illinois Tool Works, Chicago, Ill.
- Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.
- McCarthy Drill & Tool Co., New York, N. Y.
- Mergenthaler Co., The, Baltimore, Md.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- National Tool Co., The, Cleveland, O.
- ◆ Peerless High Speed—The Cleveland Twist Drill Co., Cleveland, O.
- Polk & Son, A. J., Millersburg, Pa.
- Pratt & Whitney Co., Hartford, Conn.
- Standard Tool Co., Cleveland, O.
- Union Twist Drill Co., Athol, Mass.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, CYLINDER.**

- Critchley, Genuine—Chadwick & Trefethen, Portsmouth, N. H.
- Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.
- ◆ McCrosky Tool Corp., Meadville, Pa.

**REAMERS, ELECTRIC.**

- Hard Service—The Van Dorn & Dutton Co., Cleveland, Ohio.
- Hisey-Wolf Machine Co., Cincinnati, Ohio.
- Peerless—Cincinnati Electric Tool Co., Cincinnati, O.
- Van Dorn—Van Dorn Electric Tool Co., Cleveland, Ohio.
- Wodack—Wodack Electric Tool Corp., Chicago, Ill.

**REAMERS, EXPANDING.**

- ◆ Adjustable Paradox—The Cleveland Twist Drill Co., Cleveland, O.
- Alvord Reamer & Tool Co., Millersburg, Pa.
- Bilton Machine Tool Co., The, Bridgeport, Conn.
- Critchley, Genuine—Chadwick & Trefethen, Portsmouth, N. H.
- Cutter & Wood Supply Co., Boston, Mass.
- Davis—Davis Boring Tool Co., Inc., St. Louis, Mo.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.
- Mayhew Steel Products, Inc., New York, N. Y.
- Mergenthaler Co., The, Baltimore, Md.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Nicholson, W. H., & Co., Wilkesbarre, Pa.
- Polk, A. J., & Son, Millersburg, Pa.
- Pratt & Whitney Co., Hartford, Conn.
- Scheilenbach-Hunt Co., Cincinnati, O.
- ◆ Shield Brand—Standard Tool Co., Cleveland, O.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, FLEXIBLE SHAFT.**

- ◆ Pittsburgh—Gem Mfg. Co., Pittsburgh, Pa.

**REAMERS, HIGH SPEED.**

- ◆ Detroit Twist Drill Co., Detroit, Mich.
- ◆ Peerless—Cleveland Twist Drill Co., Cleveland, O.

**REAMERS, LOCOMOTIVE.**

- Alvord Reamer & Tool Co., Millersburg, Pa.
- Buckeye Twist Drill Co., The, Alliance, O.
- ◆ Cleveland Twist Drill Co., Cleveland, O.
- ◆ Greenfield Tap & Die Corp., Greenfield, Mass.
- ◆ Hercules—Whitman & Barnes Mfg. Co., Akron, O.
- Latrobe—Latrobe Tool Co., Latrobe, Pa.
- Pratt & Whitney Co., Hartford, Conn.

**REAMERS, PIPE.**

- Adamantine—American Tap & Die Co., Greenfield, Mass.

- Alvord Reamer & Tool Co., Millersburg, Pa.
- Anderson Tool & Supply Co., Detroit, Mich.
- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Browns—The Ashcroft Mfg. Co., New York, N. Y.
- Brubaker, W. L., & Bros., Millersburg, Pa.
- B. & S.—The Billings & Spencer Co., Hartford, Conn.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.
- Columbus—Columbus Machine Works, Columbus, Ind.
- Crown Die & Tool Co., Chicago.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hercules—The E. F. Reece Co., Greenfield, Mass.
- Hollands—Hollands Mfg. Co., Erie, Pa.
- Lord—The C. H. Yonts Co., Meadville, Pa.
- Martin, C. E., Greenfield, Mass.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Mueller Mfg. Co., Decatur, Ill.
- ◆ National Twist Drill & Tool Co., Detroit, Mich.
- Polk, A. J., & Son, Millersburg, Pa.
- Pratt & Whitney Co., Hartford, Conn.
- ◆ Shield Brand—Standard Tool Co., Cleveland, O.
- ◆ Smart—Greenfield Tap & Die Corp., Greenfield, Mass.
- W. C. Carver Tool Works, Spring Valley, N. Y.
- ◆ Walworth Halls—Walworth Mfg. Co., Boston, Mass.
- Woodward-Wanger Co., Philadelphia, Pa.

**REAMERS, PISTON PIN.**

- Chadwick & Trefethen, Portsmouth, N. H.

**REAMERS, PNEUMATIC.**

- Baird Pneumatic Tool Co., Topeka, Kan.
- Ingersoll-Rand Co., New York, N. Y.
- Little Giant—Chicago Pneumatic Tool Co., Chicago.
- Miles-Bement-Pond Co., New York, N. Y.
- Thor—Independent Pneumatic Tool Co., Chicago, Ill.

**REAMERS, ROSE**

- Pratt & Whitney Co., Hartford, Conn.

**REAMERS, SHELL AND CORE.**

- Alvord Reamer & Tool Co., Millersburg, Pa.
- Buckeye Twist Drill Co., The, Alliance, O.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- ◆ Cleveland Twist Drill Co., Cleveland, O.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- Elco—Lagerholm, E., Co., Inc., Chicago, Ill.
- ◆ Green River—Greenfield Tap & Die Corp., Greenfield, Mass.
- Mergenthaler Co., The, Baltimore, Md.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- National Tool Co., The, Cleveland, O.
- Polk & Son, A. J., Millersburg, Pa.
- Pratt & Whitney Co., Hartford, Conn.
- ◆ Standard Tool Co., The, Cleveland, O.
- U. S. High Speed Steel & Tool Corp., New York.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.

**REAMERS, SPIRAL FLUTED, ROSE CHUCKING.****ROSE SHELL.**

- ◆ Cleveland Twist Drill Co., The, Cleveland, O.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- ◆ Whitman & Barnes Co., The, Akron, Ohio.

**REAMERS, SQUARE.**

- Braunsdorf-Mueller Co., Elizabeth, N. J.
- Crescent Co., Inc., The, Meriden, Conn.
- Red Devil—Smith & Hemenway Co., Irvington, N. J.
- Wolverine Brass Works, Grand Rapids, Mich.

**REAMERS, TAPER AND TAPER PIN**

- Advance—Advance Machinery Co., Van Wert, O.
- Alvord Reamer & Tool Co., Millersburg, Pa.
- American Saw & Tool Works, Chicago, Ill.
- Bliss E. C., Mfg. Co., Providence, R. I.
- Buck Bros., Millbury, Mass.
- Buckeye Twist Drill Co., The, Alliance, O.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Chapin-Skelton Tool Corp., Syracuse, N. Y.
- Clark Equipment Co., Buchanan, Mich.
- ◆ Cleveland Twist Drill Co., Cleveland, O.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- Gammons—Gammons Holman Co., Manchester, Conn.
- Gale—Sawyer Co., Boston, Mass.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hanscom Cutter Works, Boston, Mass.
- ◆ Hercules—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hollands—Hollands Mfg. Co., Erie, Pa.
- Illinois Tool Works, Chicago, Ill.
- Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.



- ◆ Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.
- Lord—The C. H. Yonts Co., Meadville, Pa.
- Manufacturers' Machine Products Co., Detroit, Mich.
- Mergenthaler Co., The, Baltimore, Md.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Mueller Mfg. Co., H., Decatur, Ill.
- Polk & Son, A. J., Millersburg, Pa.
- Pratt-Whitney Co., Hartford, Conn.
- Reiff & Nestor Co., Lykens, Pa.
- Rochester Machine Screw Co., Rochester, N. Y.
- Scully Jones & Co., Chicago, Ill.
- ◆ Shield Brand—The Standard Tool Co., Cleveland, O.
- Syracuse Twist Drill Co., Syracuse, N. Y.
- Toledo Drill & Tool Co., Toledo, O.
- Union Twist Drill Co., Athol, Mass.
- Van Dorn & Dutton Co., Cleveland, O.
- Whitaker—Whitaker Mfg. Co., The, Chicago, Ill.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

**REAMERS, VALVE RESEATING.**

- ◆ Kelley Reamer Co., Cleveland, O.
- Lord—The C. H. Yonts Co., Meadville, Pa.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- Skinner—James McCrea & Co., Chicago, Ill.
- Sterling—Adam A. Long, Rochester, N. Y.
- Stow Flexible Shaft Co., Philadelphia, Pa.
- Universal—The C. H. Yonts Co., Meadville, Pa.

**RECIPIERS, AIR.**

- Amco Sales Corp., Chicago, Ill.
- Biggs Boiler Works Co., The, East Akron, O.
- Blaisdell Machinery Co., Bradford, Pa.
- Bury Compressor Co., Erie, Pa.
- Casey-Hedges Co., The, Chattanooga, Tenn.
- Chicago Pneumatic Tool Co., New York, N. Y.
- Columbian Steel Tank Co., Kansas City, Mo.
- ◆ Fairbanks, Morse & Co., Chicago, Ill.
- Fairhurst—American Air Compressor Works, Brooklyn, N. Y.
- Hall—Hall Steam Pump Co., Pittsburgh, Pa.
- Ingersoll-Rand Co., New York, N. Y.
- Koven & Bro., L. O., Jersey City, N. J.
- Lake Erie Boiler Works, Buffalo, N. Y.
- Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.
- Obermayer Co., The S., Cincinnati, O.
- Pacific-General Boilers Co., Waukegan, Ill.
- Petroleum Iron Works Co., Sharon, Pa.
- Phoenix Iron Works Co., Meadville, Pa.
- Seale, Wm. B., & Sons Co., Pittsburgh, Pa.
- Steel Tank & Products Corporation of Aurora, Chicago, Ill.
- Thompson Iron Works, Philadelphia, Pa.
- Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.
- Worthington Pump & Machinery Corp., New York, N. Y.

**RECIPIERS AND PURIFIERS, STEAM.**

- Baragwanath, Wm., & Son, Chicago, Ill.
- Curtis—Julian d'Este Co., Boston, Mass.
- Rado Co., The, Milwaukee, Wis.
- Simonds—Simonds Heating & Specialty Co., Detroit
- ◆ Swartwout—The Ohio Body & Blower Co., Cleveland, O.
- Victor—The Steam Appliance Co., Milwaukee, Wis.
- Whitlock Coil Pipe Co., The, Hartford, Conn.

**RECEPTORS, SHOWER BATH.**

- Day-Ward Co., The, Warren, O.
- Eclipse—Fleck Bros. Co., Philadelphia, Pa.
- Furlong, Thos. N., San Francisco, Cal.
- Gothic—United States Sanitary Mfg. Co., Pittsburgh, Pa.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.
- Ideal—The Trenton Potteries Co., Trenton, N. J.
- Kohler Co., Kohler, Wis.
- Mott Iron Works, The J. L., Trenton, N. J.
- Panelton—Monument Pottery Co., The, Trenton, N. J.
- Porece—Thos. Maddock's & Sons Co., Trenton, N. J.
- Portshow—Thos. Maddock's & Sons Co., Trenton, N. J.
- Regal—Haines, Jones & Cadbury Co., Philadelphia.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.
- Tepeco—Trenton Potteries Co., Trenton, N. J.
- Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

**RECORDERS, COMBINED BAROMETRIC AND VACUUM.**

- Uehling—Uehling Instrument Co., New York, N. Y.

**RECORDERS AND INDICATORS, COMBUSTION AND FLUE GAS, OR C-O-2.**

- Defender Automatic Regulator Co., St. Louis, Mo.
- Eddy—Hays, Jos. W., Corp., Michigan City, Ind.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Hays, Vulcan—Vulcan Fuel Economy Co., Chicago, Ill.
- Hays—Hays, Jos. W., Corp., Michigan City, Ind.
- Hays—Pierce Co., The Wm. B., Buffalo, N. Y.
- Precision—Precision Instrument Co., Newark, N. J.
- Republic—Republic Flow Meters Co., Chicago, Ill.
- Sarco—The Sarco Co., Inc., New York, N. Y.

- Sargent—The Sargent Steam Meter Co., Chicago, Ill.
- Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.
- Thwing Instrument Co., Philadelphia, Pa.
- Uehling—Uehling Instrument Co., New York, N. Y.

**RECORDERS, DIFFERENTIAL.**

- Foxboro Co., Inc., The, Foxboro, Mass.

**RECORDERS, DRAFT.**

- Uehling—Uehling Instrument Co., New York, N. Y.

**RECORDERS, ELECTRIC TIME.**

- Bristol's—Bristol Co., Waterbury, Conn.

**RECORDERS, ELEVATOR MILEAGE**

- Dwight—Dwight Mfg. Co., Chicago, Ill.

**RECORDERS, HEATING FURNACE.**

- Leeds & Northrup Co., Philadelphia.

**RECORDERS, MOTION.**

- Bristol's—Bristol Co., The, Waterbury, Conn.

**RECORDERS, PRESSURE AND VACUUM.**

(See "Gages, Recording and Indicating.")

- The Bristol Co., Waterbury, Conn. (See advertisement on page 326.)

**RECORDERS AND INDICATORS, SPECIFIC GRAVITY.**

- Precision Instrument Co., Newark, N. J.

**RECORDERS, SPEED.**

- Chicago Pneumatic Tool Co., New York.

**RECORDERS, STEAM TRAP.**

- Precision Thermometer & Instrument Co., Philadelphia, Pa.

**RECORDERS, TEMPERATURE.**

(See "Thermometers, Recording.")

**RECORDERS, OR SYSTEMS, TIME, FOR OFFICES OR FACTORIES.**

- Bristol's—The Bristol Co., Waterbury, Conn.
- Brown—Brown Instrument Co., The, Philadelphia, Pa.
- Foxboro Co., Inc., The, Foxboro, Mass.
- Productograph—Slocum, Avran & Slocum, Inc., Laboratories, New York.
- Simplex Time Recorder Co., Gardner, Mass.

**RECORDERS, WATER FLOW.**

- Bristol's—Bristol Co., The, Waterbury, Conn.
- ◆ Yarway—Lea V-Notch—Yarnall-Waring Co., Philadelphia, Pa.

**RECORDERS, WATER LEVEL.**

- Bristol's—Bristol Co., The, Waterbury, Conn.

**REDUCERS, BRASS.**

(See "Fittings, Pipe, Brass.")

**REDUCERS, CAST IRON.**

(See "Fittings, Pipe, Cast Iron.")

**REDUCERS, CLOSET SPUD.**

- Acheson Mfg. Co., Braddock, Pa.
- American Sanitary Mfg. Co., Abingdon, Ill.
- Briggs, William, Brooklyn, N. Y.

**REDUCERS, DRAINAGE.**

(See "Fittings, Pipe, Drainage.")

**REDUCERS, ECCENTRIC.**

(See "Fittings, Pipe, Eccentric.")

**REDUCERS, HOSE.**

(See "Fittings, Hose, Brass.")

**REDUCERS, MALLEABLE IRON.**

(See "Fittings, Pipe, Malleable Iron.")

**REDUCERS, SPEED.**

(See "Gears, Speed Reduction Units.")

- ◆ Jones—W. A. Jones Foundry & Machine Co., Chicago, Ill.

**REELS, CABLE, FOR PORTABLE ELECTRIC MACHINES.**

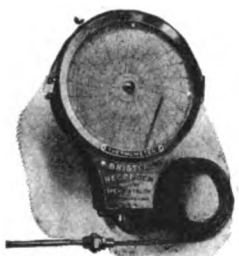
- Gleason, J. L., & Co., Boston, Mass.

**REELS, ELECTRIC LIGHT EXTENSION.**

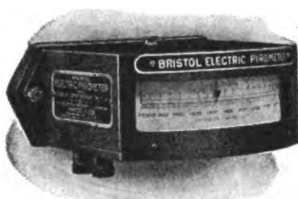
- Anderson Electric & Equipment Co., Chicago, Ill.
- Cincinnati Specialty Mfg. Co., Inc., Cincinnati, O.



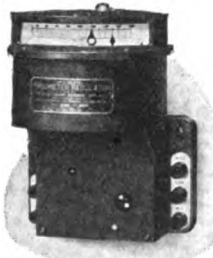
Pressure Gauge



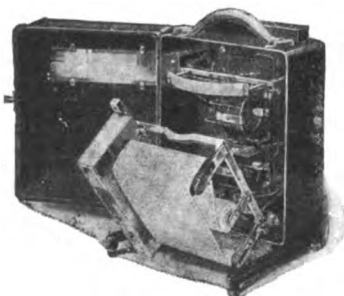
Recording Thermometer



Indicating Pyrometer



Temperature Controller



Strip Type Portable Wattmeter

# THE BRISTOL COMPANY

WATERBURY, CONN., U. S. A.

Manufacturers of

TRADE MARK

## BRISTOL'S

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Recording Gauges, Thermometers, Pyrometers, Psychrometers, Electrical Instruments, Tachometers, Electrical and Mechanical Operation Instruments, Temperature Controllers, Liquid Level Recorders, Long Distance Electrical Transmitting Recording System, Counters and Radian Averaging Instruments.

**PRESSURE AND VACUUM**—Recording Instruments for steam, gas, air and liquids.

**LIQUID LEVEL**—Recording Instruments for recording depths of water or other liquids in tanks, water towers, reservoirs, etc.

**TEMPERATURE**—Recording and Indicating Thermometers for temperatures up to 800° F.

Bristol's Electric Pyrometers, Indicating and Recording for temperatures up to 3000° F.

Bristol's Temperature Controller Models 176, 276 and 376 for regulating temperatures up to 800° F.

Bristol's Pyrometer Temperature Controller for higher temperatures up to 3000° F.

**ELECTRICITY**—Recording Voltmeters, Ammeters, Wattmeters, Milli-Voltmeters, Shunt Ammeters and Frequency Meters. Instruments furnished in both round chart and strip chart type.

**TIME**—Electric Time Recording Instruments furnished in both round chart and strip chart type.

**MOTION**—Mechanical Time Recording Instruments.

**SPEED**—Recording Tachometers.

**MISCELLANEOUS**—Bristol-Durand Radian Averaging Instruments, Gaugeboard Clocks, Bristol Counters.

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San Francisco

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**REELS, ROSE.**

A. B. C.—Cliff & Guilbert Co., New York, N. Y.  
 All Metal—Wirt & Knox Mfg. Co., Philadelphia.  
 Atlas—American Fire Apparatus Co., New York, N. Y.  
 Boyd—Cliff & Guilbert Co., New York, N. Y. (swinging).  
 Buckeye—Hamilton Rubber Mfg. Co., Trenton, N. J.  
 Clay's Improved—John H. Clay, Philadelphia, Pa.  
 Cliff—Cliff & Guilbert Co., New York, N. Y.  
 Cliff Automatic Safety—Cliff & Guilbert Co., New York, N. Y.  
 Detachable—Specialty Mfg. Co., St. Paul, Minn.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Fountain—Fairbanks, Morse & Co., Chicago, Ill.  
 Gaylord Automatic and Gaylord Disappearing—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Guilbert—Cliff & Guilbert Co., New York, N. Y.  
 Hayward, S. F. & Co., New York.  
 Improved A. B. C.—Cliff & Guilbert Co., New York, N. Y.  
 McKinnon—McKinnon Dash Co., Buffalo, N. Y.  
 Miller Chemical Engine Co., Chicago, Ill.  
 National—M. Donohue & Son, New York.  
 Northern Fire Apparatus Co., Minneapolis, Minn.  
 Perfection—Fairbanks, Morse & Co., Chicago, Ill.  
 Powhatan Brass & Iron Works, Charles Town, W. Va.  
 Rex—Charles Nuhning & Bro., Cincinnati, O.  
 Rowe, A. C. & Son, Inc., New York, N. Y.  
 Ryerson—W. D. Allen Mfg. Co., Chicago, Ill.  
 Seagrave—Seagrave Co., Columbus, Ohio.  
 Seattle Brass Co., Seattle, Wash.  
 Surprise—J. W. Buckley Rubber Co., New York, N. Y.  
 Wirt's Swinging—Wirt-Knox Mfg. Co., Philadelphia, Pa.  
 Woodhouse Mfg. Co., The, New York, N. Y.

**REELS, PAY-OUT.**

Dicke Tool Co., Downers Grove, Ill.

**REEL (HOSE) TRUCK, STRAINER AND SPRINKLER COMBINED.**

C. B.—Cellina Specialty Co., Cellina, O.

**REELS, ROUND, CENTRIFUGAL.**

Wolf Company, The, Chambersburg, Pa.

**REELS, SAND, OIL WELL.**

Oklahoma Tool & Supply Co., Tulsa, Okla.

**REELS, SHEET METAL.**

Baird Machine Co., The, Bridgeport, Conn.  
 Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

**REFACERS, BAND SAW WHEEL.**

Armstrong Mfg. Co., Portland, Ore.

**REFLECTORS OR ILLUMINATORS, GAGE GLASS**

Safe Guard—Reordway Co., The, Chicago, Ill.

**REFLECTORS FOR LIGHTING FIXTURES.**

(See also "Fixtures, Lighting.")

Abolites—The National Screw & Tack Co., Cleveland, O.  
 Baltimore Enamel & Novelty Co., Baltimore, Md.  
 Diamond—Klemm & Co., Philadelphia, Pa.  
 Faries Mfg. Co., Decatur, Ill.  
 Gleason-Tiebut Glass Co., Inc., Brooklyn, N. Y.  
 Trade names—Carrara, Gletico, Opalux, Camia, Amazon.  
 Holophane, D'Olier-Veluria, Pyro—Holophane Works of General Electric Co., Cleveland, O.  
 Inland Electric Co., Chicago, Ill.  
 Reflectolyte—Reflectolyte Co., The, St. Louis, Mo.

**REFRACTORIES, CARBORUNDUM.**

Carborundum—The Carborundum Co., Niagara Falls, N. Y.  
 Impervite—Charles Engelhard, New York, N. Y.  
 ♦ Norton, Alundum, Crystolon—Norton Co., Worcester, Mass.

**REFRIGERATORS, ELECTRIC.**

Frigidaire Corporation, Dayton, O.  
 Isko—The Isko Company, Chicago, Ill.  
 Utility Compressor Co., Adrian, Mich.

**REGENERATORS, STEAM.**

Ratean—Ratean Steam Regenerator Co., New York.

**REGISTER GRILLES, WIRE.**

Columbus Wire & Iron Works, Columbus, O.  
 Hart & Cooley Co., Inc., New Britain, Conn.  
 Highton, Wm., & Sons Co., Nashua, N. H.

**REGISTERS, AIR, FOR OIL BURNERS.**

Enco—The Engineer Co., New York, N. Y.

**REGISTERS, ELEVATOR.**

Desper Co., H. A., Worcester, Mass.  
 ♦ Nordyke & Marmon Co., Indianapolis, Ind.  
 Port Huron Engine & Thresher Co., Port Huron, Mich.

**REGISTERS, WARM AIR, FLOOR, WALL AND BASE-BOARD.**

Arcade Mfg. Co., Freeport, Ill.  
 Barber Mfg. Co., The, Ashtabula, O.  
 Berger, L. D., Philadelphia, Pa.  
 Chicago Hardware Fdy Co., Chicago, Ill.  
 Clark Co., Henry N., Boston, Mass.  
 ♦ Columbian Hardware, Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
 Devlin Mfg. Co., Thos., Philadelphia, Pa.  
 Ferrosteel—Tuttle & Bailey Mfg. Co., Cleveland, O.  
 Foster—Foster, C. H., St. Louis, Mo.  
 H. & C.—The Hart & Hutchinson Co., Inc., New Britain, Conn.  
 Keystone—Wm. Highton & Sons, Nashua, N. H.  
 Majestic Co., The, Huntington, Ind.  
 Moncrief—Henry-Miller Foundry Co., Indianapolis, Ind.  
 Monitor—Keith Furnace Co., Des Moines, Ia.  
 Mueller—L. J. Mueller Furnace Co., Milwaukee, Wis.  
 New Sanitary—Wm. Highton & Sons, Nashua, N. H.  
 O. K.—Wm. Highton & Sons, Nashua, N. H.  
 Padgett—The Wooden Ventilator Co., East Palestine, Ohio.  
 Quaker Mfg. Co., Chicago, Ill.  
 Snyder's—The Hess Snyder Co., Massillon, O.  
 Stover Mfg. Co., Freeport, Ill.  
 Symonds—Symonds Register Co., St. Louis, Mo.  
 Trojan—Ross Valve Mfg. Co., Troy, N. Y.  
 Tuttle & Bailey Mfg. Co., Inc., New York, N. Y.

**REGULATORS, BLOWER.**

Hohmann & Maurer Mfg. Co., The, Rochester, N. Y.  
 K. & T.—Kilpfel Mfg. Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Watson—Watson-McDaniel Co., Philadelphia, Pa.

**REGULATORS, BOILER FEED.**

(See "Regulators, Feed Water.")

**REGULATORS, CONTROLLERS, OR GOVERNORS, FAN ENGINE.**

Cash Co., A. W., Decatur, Ill.  
 ♦ Fisher Governor Co., Inc., Chicago, Ill.  
 ♦ Foster—Walworth Mfg. Co., Boston, Mass.  
 Garrett, W. D. & Co., New York, N. Y.  
 Illinois Engineering Co., Chicago, Ill.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts Mfg. Co., Oswego, N. Y.  
 K. & T.—Kilpfel Mfg. Co., Chicago, Ill.  
 ♦ Mason—Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Standard Regulator Co., Newark, N. J.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 20th Century—Atwood & Morrill, Salem, Mass.  
 Watson—Watson-McDaniel Co., Philadelphia, Pa.  
 Watts Regulator Co., Lawrence, Mass.  
 Ziermore Valve Co., Johnsonburg, Pa.

**REGULATORS, DAMPER, HEATING BOILER AND FURNACE.**

♦ American District Steam Co., North Tonawanda, N. Y.  
 Bates—Edward P. Bates, Syracuse, N. Y.  
 Berry—The Berry Engineering Co., Chester, Pa.  
 Bischoffs—C. M. Smillie, Detroit, Mich.  
 Boomer—The Hess-Snyder Co., Massillon, O.  
 Burrows—Burrows Mfg. Co., York, Pa.  
 Bushnell—Bushnell, John S., Co., Brooklyn, N. Y.  
 E-V—Thatcher Furnace Co., New York.  
 Chilson—Chilson Furnace Co., Boston, Mass.  
 Clark—E. Rutzler Co., New York, N. Y.  
 Curtis Improved—Julian d'Este Co., Boston, Mass.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 Deegan—E. J. Deegan Mfg. Co., The, New York, N. Y.  
 Diamond—Diamond Power Specialty Co., Detroit.  
 Doody Vapor Heating Co., Inc., The, Boston, Mass.  
 Donnelly Systems Co., New York.  
 Economy—L. G. Doolittle, Binghamton, N. Y.  
 ♦ Elliott—Elliott Co., Pittsburgh, Pa.  
 Exeter Machine Works, Exeter, N. H.  
 Federal Gauge Co., Chicago, Ill.  
 Fleur de lis—Boston Steam Specialty Co., Boston, Mass.  
 Ford—The Thomas P. Ford Co., New York, N. Y.  
 Foskett & Bishop Co., The, New Haven, Conn.  
 Garrett, W. D. & Co., New York.  
 Halsey—Halsey Mfg. Co., Philadelphia, Pa.  
 Hart & Cooley Co., Inc., The, New Britain, Conn.  
 Heitland Grate & Mantle Co., Quincy, Ill.  
 Hennebohle Co., Chicago, Ill.  
 Hoffmann Mfg. Co., R., Milwaukee, Wis.  
 Hyde—Hyde Regulator Mfg. Co., Westfield, N. Y.  
 Improved Fowler—Wm. Highton & Sons Co., Nashua, N. H.

Johnson—Johnson Service Co., Milwaukee, Wis.  
 Kees—F. D. Kees Mfg. Co., Beatrice, Neb.  
 Kellum—Hess & Barker, Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kewanee—Kewanee Boiler Co., Kewanee, Ill.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Killam Improved—C. M. Smillie & Co., Detroit, Mich.  
 Kitts Mfg. Co., Oswego, N. Y.  
 Lacke—Lacke Electric Mfg. Co., The, Chicago, Ill.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Leslie—The Leslie Co., Lyndhurst, N. J.  
 Little Janitor—Furnace Regulator Co., Barnesville, O.  
 Lock—Lock Regulator Co., Salem, Mass.  
 McAlear—McAlear Mfg. Co., Chicago, Ill.  
 McDonough—McDonough Coal Saving Corp., Detroit, Mich.  
 Mason—Mason Regulator Co., Boston, Mass.  
 Master—Specialty Mfg. Co., St. Paul, Minn.  
 Minneapolis—Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 Monarch—Riverside Mfg. Co., Newark, N. J.  
 Naam Mfg. Co., New York, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Parker Expansion Bolt Co., New York, N. Y.  
 Peck, Cassius Co., Rochester, N. Y.  
 Perfecto—Sixth City Sheet Metal Works Co., Cleveland, land.  
 Perry—T. O. Perry, Oak Park, Ill.  
 Powers Regulator Co., Chicago, Ill.  
 Precision—McDonough Automatic Regulator Co., Detroit, Mich.  
 Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Puffer's—W. E. Puffer & Sons, New York, N. Y.  
 The "S-C"—The "S-C" Regulator Co., Fostoria, O.  
 Spencer—John Acton, Brooklyn, N. Y.  
 Spencer—Spencer Regulator Co., Salem, Mass.  
 Sterling Engineering Co., Milwaukee, Wis.  
 Stillman-Carmichael—Stillman-Carmichael Co., Boston, Mass.  
 Syphon—The Fulton Co., Knoxville, Tenn.  
 Thrush—H. A. Thrush & Co., Peru, Ind. (Automatic.)  
 20th Century Locke—Atwood & Morrill, Salem, Mass.  
 20th Century Spencer—Atwood & Morrill, Salem, Mass.  
 Vapor Regulator Co., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Watts Regulator Co., Lawrence, Mass.  
 Weld & Co., Geo. A., Boston, Mass.  
 Western Electric—Western Electric Co., Chicago, Ill.  
 Wiley Safety Vent—Simplex Heating Specialty Co., Lynchburg, Va.  
 Wing Spencer—L. J. Wing Mfg. Co., New York, N. Y.  
 Wolverine—Wolverine Temperature Regulator Co., Marshall, Mich.  
 Wydawake—L. J. Wing Mfg. Co., New York.

#### REGULATORS, DAMPER, HYDRAULIC.

D'Este—D'Este Co., Julian, Boston, Mass.  
 McAlear Mfg. Co., The, Chicago.

#### REGULATORS, DAMPER, FOR POWER BOILERS.

A-Jacks—National Regulator Co., Chicago, Ill.  
 Acton, John, Brooklyn, N. Y.  
 ♦ Adco—American District Steam Co., North Tona-wanda, N. Y. (and relief valve combined).  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Bushnell, John S., New York.  
 Clark—Foskett & Bishop Co., New Haven, Conn.  
 Davis, G. M., Regulator Co., Chicago, Ill.  
 Defender Automatic Regulator Co., St. Louis, Mo.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Garrett, W. D., & Co., New York.  
 Hennebohle Co., Chicago, Ill.  
 Hutchison Vapor Heating Corp., Washington, D. C.  
 Improved—Julian d'Este Co., Boston, Mass.  
 ♦ Kellam—J. E. Lonergan Co., Philadelphia, Pa.  
 Kellam Bischoff Improved—C. M. Smillie & Co., Detroit, Mich.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Lewis Steam Specialty & Valve Co., Philadelphia, Pa.  
 Locke Regulator Co., Salem, Mass.  
 Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., Chicago, Ill.  
 McDonough—McDonough Coal Saving Corp., Detroit, Mich.  
 Melaphram—National Regulator Co., Chicago, Ill.  
 Patterson—Patterson Co., The, Baltimore, Md.  
 R. T. Co.'s—Richard Thompson & Co., New York, N. Y.  
 R-K—Ruggles-Klingemann Co., Salem, Mass.  
 Spencer Regulator Co., Salem, Mass.  
 Standard—Power Turbo Blower Co., New York, N. Y.  
 Stillman-Carmichael Co., Boston, Mass.  
 Syphon Regitherm—Fulton Company, The, Knoxville, Tenn.  
 Trane Co., The, La Crosse, Wis.  
 Turner—Turner Heating Co., Providence, R. I.  
 Utility—Standard Steam Specialty Co., New York.  
 Walker—Walker Metallic Packing Co., Philadelphia, Pa.  
 Watts Regulator Co., Lawrence, Mass.  
 Wydawake, Wing Type E—L. J. Wing Mfg. Co., New York, N. Y.

#### REGULATORS, DAMPER, TIME, OR CLOCK.

Ferdinand—Automatic Damper Co., Wauwatosa, Wis.  
 Little Draft Man—Sahlin Mfg. Co., Grand Rapids, Mich.  
 Marvel—American Thermostat Co., Newark, N. J.  
 Quaker Mfg. Co., Chicago, Ill.  
 Thompson—Richard Thompson & Co., New York.

#### REGULATORS, DRAFT.

Chapman—The Chapman Engineering Co., Mt. Vernon, O.  
 Highton, Wm., & Sons Co., Nashua, N. H.  
 Liberty—Moline Heat, Moline, Ill.  
 McDonough—McDonough Coal Saving Corp., Detroit, Mich.  
 Rado Co., The, Milwaukee, Wis.  
 Watts Regulator Co., Lawrence, Mass.

#### REGULATORS, DRY ROOM AND KILN.

Powers Regulator Co., Chicago, Ill.

#### REGULATORS, ELECTRIC MOTOR.

C-H—The Cutler-Hammer Mfg. Co., Milwaukee, Wis.  
 Federal Gauge Co., Chicago, Ill.  
 Sundh Electric Co., Newark, N. J.

#### REGULATORS, EXHAUST PRESSURE, FOR GAS ENGINES.

♦ Lunkenheimer Co., The, Cincinnati, O.

#### REGULATORS, FIBER WATER.

♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Berry—The Berry Engineering Co., Chester, Pa.  
 Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Boston—Boston Steam Specialty Co., Boston, Mass.  
 Bryant Heater & Mfg. Co., Cleveland, Ohio.  
 Burrows—Burrows Mfg. Co., York, Pa.  
 Copes—Erie Pump & Engine Co., Erie, Pa.  
 Dreadnaught—Central Machine Co., Philadelphia.  
 Economy—American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 Elliott Co., Jeannette, Pa.  
 ♦ Fisher Governor Co., Inc., Marshalltown, Iowa.  
 ♦ Foster—Walworth Mfg. Co., Boston, Mass.  
 Garrett, W. D., & Co., New York.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McDonough—McDonough Coal Savings Corp., Detroit, Mich.  
 Murray—Wright-Austin Co., Detroit, Mich.  
 National—Maine Valve Co., Solon, Me.  
 NevRlek—F. W. Foster & Sons Co., Boston, Mass.  
 Patterson—Patterson Co., The, Baltimore, Md.  
 Precision—McDonough Automatic Regulator Co., Detroit, Mich.  
 Powers Regulator Co., Chicago, Ill.  
 S. C.—Colles Heater & Specialty Co., Chicago, Ill.  
 Strong—Strong, Carlisle & Hammond Co., Cleveland, Ohio.  
 The S-C—The "S-C" Regulator Mfg. Co., Fostoria, O.  
 Squires, The Genuine—The C. E. Squires Co., Cleveland, O.  
 Vigilant—Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.  
 Vogt Brothers Mfg. Co., Louisville, Ky.  
 Watts Regulator Co., Lawrence, Mass.  
 Williams—The Williams Gauge Co., Pittsburgh, Pa.  
 Witt, G. E., Co., Inc., San Francisco, Cal.  
 Ziermore—Ziermore Valve Co., Johnsonburg, Pa.

#### REGULATORS, FLOW.

Davis, G. M., Regulator Co., Chicago, Ill.

#### REGULATORS, FLUSH TANK.

M. I. W. L. L.—Modern Iron Works, Quincy, Ill.  
 IXL—Pacific Flush Tank Co., Chicago, Ill.

#### REGULATORS, GAS.

Bryant—Bryant Heater & Mfg. Co., Cleveland, O.  
 Crawford—Equitable Meter Co., Pittsburgh, Pa.  
 Fulton—Chapin-Fulton Mfg. Co., Pittsburgh, Pa.  
 Fulton—Wilson & Daum Co., Pittsburgh, Pa.  
 Harger—National Gas Governor Co., New York, N. Y.  
 Hennebohle Co., Chicago, Ill.  
 Hill-Kenton Co., Anderson, Ind.  
 Imperial—National Gas Governor Co., New York.  
 Little Giant—Wilson & Daum Co., Pittsburgh, Pa.  
 Locke—Locke Regulator Co., Salem, Mass.  
 Luther—Luther Mfg. Co., Inc., Olean, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McCullough—National Gas Governor Co., New York.  
 Messer Welding Sup. Corp., Brooklyn, N. Y. (oxygen, acetylene, hydrogen).  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Oxweld—Oxweld Acetylene Co., Chicago, Ill.  
 Pickering—The Pickering Governor Co., Portland, Conn.  
 Powers Regulator Co., Chicago, Ill.  
 Reliance—Reliance Mfg. Co., Pasadena, Cal.

Reynolds Gas Regulator Co., Anderson, Ind.  
 Sprague—Sprague Meter Co., The, Bridgeport, Conn.  
 Springfield—Gilbert & Barker, Springfield, Mass.  
 Standard—E. C. Merrill, Pittsburgh, Pa.  
 Strater, Herman, & Sons, Boston, Mass. (Carbonic.)  
 Try-Me—Try-Me Mfg. Co., Westfield, Mass.  
 Union Water Meter Co., Worcester, Mass.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.  
 Yoder—The Yoder-Thomas Mfg. Co., Cleveland, O.  
 Young's—Equitable Meter Co., Pittsburgh, Pa.

**REGULATORS, HUMIDITY.**

Carr Pump Governor Co., E. M., New Castle, Ind.  
 Humidostat—Johnson Service Co., Milwaukee, Wis.  
 Swan—Klipfel Mfg. Co., Chicago, Ill.

**REGULATORS, OIL BURNER.**

Tate-Jones & Co., Inc., Pittsburgh, Pa.

**REGULATORS, OIL LEVEL.**

Vigilant—Chapin-Fulton Mfg. Co., Pittsburgh, Pa.

**REGULATORS, OVEN HEAT.**

National Stove Co., Div., Lorain, O.

**REGULATORS, OXYGEN AND ACETYLENE.**

Bastian-Blessing Co., The, Chicago, Ill.  
 Berno—Bertschey Engineering Co., Cedar Rapids, Iowa.  
 Federal—Federal Brass Works, Chicago, Ill.  
 Milburn—Alexander Milburn Co., Baltimore, Md.  
 Messer Mfg. Co., Philadelphia, Pa.  
 Torchweid—Torchweid Equipment Co., Chicago, Ill.

**REGULATORS, PRESSURE, AIR.**

Bishop & Babcock Co., The, Cleveland, O.  
 Burdett Mfg. Co., Chicago, Ill.  
 C. C.—Crane Valve Co., Bridgeport, Conn.  
 Champion—The Cleveland Faucet Co., Cleveland, O.  
 Clark—H. W. Clark Co., Mattoon, Ill.  
 Cloos Safety Appliance Co., The, Milwaukee, Wis.  
 d'Este Co., Julian, Boston, Mass.  
 Federal Gauge Co., Chicago, Ill.  
 Fisher Governor Co., Chicago, Ill.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 K. & T.—Klipfel Mfg. Co., Chicago, Ill.  
 Mason—Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Powers Regulator Co., Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Strater's—Herman Strater & Sons, Boston, Mass.  
 Tagliabue Mfg. Co., C. J., Brooklyn, N. Y.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Try-Me—Try-Me Mfg. Co., Westfield, Mass.  
 Tyco's—Taylor Instrument Companies, Rochester, N. Y.  
 Walworth Mfg. Co., The, Boston, Mass.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.  
 Watts—Watts Regulator Co., Lawrence, Mass.

**REGULATORS, PRESSURE, STEAM.**

American District Steam Co., North Tonawanda, N. Y.  
 Atlas—Hall Mfg. Co., Harrison, N. J.  
 Cartwright & Caps Co., Chicago, Ill.  
 C. C.—Crane Valve Co., Bridgeport, Conn.  
 Chicago Automatic Switch Co., Chicago, Ill.  
 Crook, H. E., Co., Inc., Baltimore, Md.  
 Curtis and Improved—Julian d'Este Co., Boston, Mass.  
 Davis Regulator Co., G. M., Chicago, Ill.  
 Electrite—Sundh Electric Co., Newark, N. J.  
 Federal Gauge Co., Chicago, Ill.  
 Fisher—The Fisher Governor Co., Chicago, Ill.  
 Foster—Walworth Mfg. Co., Boston, Mass.  
 Garrett, W. D., & Co., New York.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Garrett, W. D., & Co., New York.  
 Gold—Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
 H. & M.—The Hohmann & Maurer Mfg. Co., Rochester, N. Y.  
 Hornung, J. C., Chicago, Ill.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Klipfel Mfg. Co., Chicago, Ill.  
 Locke Regulator Co., Salem, Mass.  
 Lamy, A., & Son, Elizabeth, N. J.  
 Lonergan, J. E., Co., Philadelphia, Pa.  
 Lytton—Lytton Mfg. Corp., Franklin, Va.  
 Mason—Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 National Regulator Co., Chicago, Ill.  
 Perfect & Simplex—C. T. Tagliabue Mfg. Co., New York, N. Y.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Pittsburgh Valve & Fittings Co., Barberton, O.  
 Powers Regulator Co., Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 R. T. & Co.—Richard Thompson & Co., New York, N. Y. (for paper machines).  
 Stickle—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Tagliabue, C. J., Mfg. Co., Brooklyn, N. Y.  
 Thompson—Richard Thompson & Co., New York.  
 20th Century—Atwood & Morrill, Salem, Mass.  
 Try-Me—Try-Me Mfg. Co., Westfield, Mass.  
 Union Water Meter Co., Worcester, Mass.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.  
 Watts Regulator Co., Lawrence, Mass.  
 Ziermore—Ziermore Regulator Co., Johnsonburg, Pa.

**REGULATORS, PRESSURE, WATER.**

Acton, John, Brooklyn, N. Y.  
 Anderson—Golden-Anderson Specialty Co., Pittsburgh.  
 Atwood & Morrill, Salem, Mass.  
 Bishop & Babcock Co., Cleveland, O.  
 Boston—Geo. E. Gilchrist Co., Boston, Mass.  
 Buckeye—Buckeye Pump & Mfg. Co., The, Columbus, Ohio.  
 Cleveland Faucet Co., The, Cleveland, O.  
 Curtis—Julian d'Este Co., Boston, Mass.  
 Economy Pumping Machinery Co., Chicago, Ill.  
 Engel Mfg. Co., Syracuse, N. Y.  
 Federal Gauge Co., Chicago, Ill.  
 Fisher Governor Co., Chicago, Ill.  
 Ford—The Thos. P. Ford Co., New York, N. Y.  
 Foster—Walworth Mfg. Co., Boston, Mass.  
 Fulton—Chapin-Fulton Mfg. Co., Pittsburgh, Pa. (back or check).  
 Garrett, W. D., & Co., New York.  
 Honeywell—Honeywell Heating Specialty Co., Wabash, Ind.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Hydromatic—The Engineers' Appliance Co., Cleveland, Ohio.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Locke—Locke Regulator Co., Salem, Mass.  
 Manthey—Sleker Co., Milwaukee, Wis.  
 Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Moise—Merritt & Co., Camden, N. J.  
 Monitor—The Jarvis Engine & Machine Works, Lansing, Mich.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Ohio Pump & Brass Co., The, Columbus, O.  
 Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.  
 Powers Regulator Co., Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Robertshaw—Robertshaw Mfg. Co., Youngwood, Pa.  
 Rosenberg Motor & Mfg. Co., A., Baltimore, Md.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Try-Me—Try-Me Mfg. Co., Westfield, Mass.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Union Water Meter Co., Worcester, Mass.  
 Watson—Stillman Co., New York, N. Y.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.  
 Watts Regulator Co., Lawrence, Mass.

**REGULATORS, PUMP.**

(See "Governors, Pump.")

**REGULATORS, REFRIGERATION.**

Powers Regulator Co., Chicago, Ill.

**REGULATORS, STEERING ENGINE.**

Curtis—Julian d'Este Co., Boston, Mass.

**REGULATORS, STOKER.**

Fisher Governor Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McDonough—McDonough Coal Savings Corp., Detroit, Mich.

**REGULATORS, TANK.**

I. X. L.—Modern Iron Works, Quincy, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 Sylphon—Fulton Company, The, Knoxville, Tenn.

**REGULATORS, TEMPERATURE.**

(See also "Thermostats" and "Regulators, Damper.")  
 American Gas Furnace Co., Elizabeth, N. J.  
 Anderson—The Anderson Mfg. Co., Philadelphia, Pa.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Arco—American Radiator Co., Chicago, Ill.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Bristol's—Bristol Co., The, Waterbury, Conn.  
 Carrier Air Conditioning Co., Buffalo, N. Y.  
 Chicago—Illinois Malleable Iron Co., Chicago, Ill.

Consolidated Car Heating Co., Albany, N. Y. (for railway cars).  
 Curtis Improved—Julian d'Este Co., Boston, Mass.  
 Dahl-Mo-Stat—Dahl Mfg. & Sales Co., The, Minneapolis, Minn.  
 D. & T.—D. & T. Mfg. Co., St. Louis, Mo.  
 Engelhard, Chas., New York, N. Y.  
 Equitherm Control Corp., Brooklyn, N. Y.  
 Faultless—C. T. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Federal Gauge Co., Chicago, Ill.  
 Gold—Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
 Hornung, J. C., Chicago, Ill.  
 Johnson—Johnson Service Co., Milwaukee, Wis.  
 Klymax—Kellogg Mackay Co., Chicago, Ill.  
 Marvel—American Thermostat Co., Newark, N. J.  
 Master—Master Heat Regulator Co., The, St. Paul, Minn.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Minneapolis—Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 National Regulator Co., Chicago, Ill.  
 Perfect—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Roy's—Roy's Heat Control Co., Brooklyn, N. Y.  
 Sarco—Sarco Co., Inc., New York.  
 Simplex—Simplex Heating Specialty Co., Lynchburg, Va.  
 Souder—Souder-Hornaby Co., Inc., Tamaqua, Pa.  
 Swan—Kilpfel Mfg. Co., Chicago, Ill.  
 Syphon Regitherm—Fulton Company, The, Knoxville, Tenn.  
 Thermo Control—Consolidated Engineering Co., Chicago, Ill.  
 Thrush—H. A. Thrush & Co., Peru, Ind.  
 Tyco's—Taylor Instrument Companies, Rochester, N. Y.  
 V R Co.—Vapor Regulator Co., Philadelphia, Pa.  
 Western Electric Co., Inc., Chicago, Ill.  
 Wolverine—Wolverine Temperature Regulator Co., Marshall, Mich.

#### REGULATORS, TEMPERATURE, HOT WATER.

Augmore—Augmore Mfg. Co., Cleveland, O.  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 D. & T. Mfg. Co., The, St. Louis, Mo.  
 d'Este Co., Julian, Boston, Mass.  
 Garrett, W. D., & Co., New York.  
 H. & M.—The Hohmann & Maurer Mfg. Co., Rochester, N. Y.  
 Hennebohle Co., Chicago, Ill.  
 Honeywell—Honeywell Heating Specialty Co., Wabash, Ind.  
 Hotstream—Hotstream Heater Co., Cleveland, O.  
 Ideal Syphon—American Radiator Co., Chicago.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Minneapolis—Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 National Regulator Co., Chicago, Ill.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Reading Heater & Supply Co., Reading, Pa.  
 Robertshaw Tank Regulator—Robertshaw Mfg. Co., Youngwood, Pa.  
 Sarco—Sarco Co., Inc., New York.  
 Swan—Kilpfel Mfg. Co., Chicago, Ill.  
 Tagliabue Mfg. Co., C. T., New York, N. Y.  
 Taylor—Taylor Burner & Electroplating Co., Pittsburgh, Pa.  
 Victor—Standard Regulator Co., New York, N. Y.  
 Weld & Co., Geo. A., Boston, Mass.

#### REGULATORS, VACUUM.

Chicago Automatic Switch Co., Chicago, Ill.  
 Federal Gauge Co., Chicago, Ill.  
 Fisher Governor Co., Inc., The, Chicago, Ill.  
 Foster—Foster Engineering Co., Newark, N. J.  
 Kielev—Kieley & Mueller, New York, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Watts Regulator Co., Lawrence, Mass.  
 Ziermore—Ziermore Valve Co., Johnsonburg, Pa.

#### REGULATORS, WATER LEVEL.

Barrett, W. D., & Co., New York.  
 Federal Gauge Co., Chicago, Ill.  
 Fisher Governor Co., Chicago, Ill.  
 Fulton—Chapin-Fulton Mfg. Co., Pittsburgh, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kilpfel Mfg. Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Ofeldt—Gas Fired Boiler Co., Inc., Nyack, N. Y.  
 Peters—The Steam Appliance Co., West Allis, Wis.  
 Swartwout—Ohio Body & Blower Co., Cleveland, O.  
 XX Century—Atwood & Morrill, Salem, Mass.

#### REGULATORS, WATER WHEEL.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 Bradley, C. P., Machine Works, West Stafford, Conn.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.

#### REGULATORS, WINDMILL.

Acme, Champion, Rex, & Tollerday—Treaty Co., The, Greenville, O.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Femco—Fairbanks, Morse & Co., Chicago, Ill.  
 H-A Co.—The Heller-Aller Co., Napoleon, O.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.

#### REHEATERS, AIR.

Chicago Pneumatic Tool Co., New York, N. Y.  
 Ingersoll-Rand Co., New York, N. Y.  
 Whitlock Coil Pipe Co., Hartford, Conn.

#### RELIEF, PRESSURE, HEATING BOILER.

Thrush Differential—H. A. Thrush & Co., Peru, Ind.

#### REMOVERS, BUSHING.

Conant & Donelson Co., Conway, Mass.

#### REMOVERS, LEAD JOINT.

Smith, A. P., Mfg. Co., East Orange, N. J.

#### REMOVER, SCALE.

(See "Cleaners, Boiler Flue" and "Compounds, Boiler.")

#### REPAIRS, BOILER TUBE.

M. & P.—The M. & P. Tube Repair Co., Marseilles, Ill.

#### REPAIRS, CLOSET AND URINAL.

Glauber & Co., M., New York, N. Y.  
 Perfection—Wolverine Brass Works, Grand Rapids, Mich.  
 Queen City—Fries & Co., Buffalo, N. Y.

#### REPAIRS AND PARTS, COMPRESSION AND FULLER COCKS.

American Foundry & Mfg. Co., St. Louis, Mo. (Trade names—Alaska, National, T. E. Challenge, Muddock, McNamara, Empire, California.)  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Burlington Brass Works, Burlington, Wis.  
 Cochran, J. A., Brass Mfg. Co., The, Cleveland, O.  
 Durst Mfg. Co., The, New York.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 Monarch Brass Co., The, Cleveland, O.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Savill, Thomas, & Sons, Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### REPAIRS, ROSE.

Clay, John H., Philadelphia, Pa.  
 Beats 'Em All—Wieder Mfg. Co., Warren, O.

#### REPAIRS, RANGE BOILER, TANK, PIPE, ETC.

(See also "Plugs, Tap.")

Butterworth—Butterworth Supply Co., Philadelphia.  
 Connery & Co., Inc., Philadelphia, Pa.  
 Good—Good Mfg. Co., New York, N. Y.  
 J. R. S.—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Modern Mfg. Co., The, Cleveland, Ohio.  
 Ruemmel Dawley Mfg. Co., St. Louis, Mo.  
 Ryan & Fitzpatrick Co., Inc., Troy, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### REPLACERS, CAR.

Aldon—The Aldon Co., Chicago, Ill.  
 Alexander—Alexander Car Replacer Mfg. Co., Scranton, Pa.  
 Buda—The Buda Co., Chicago, Ill.  
 J. C.—The Joyce Cridland Mfg. Co., Dayton, O.

#### RESAWS, BAND AND CIRCULAR.

American Saw Mill Machinery Co., Hackettstown, N. J.

#### RESEATERS, FLUSH, WATER CLOSET.

A. B. Utley & Co., Springfield, Mo.

#### RESPIRATORS AND RESUSCITATING DEVICES.

Autocrat—American Thermo-Ware Co., New York.  
 Chicago Eye Shield Co., Chicago, Ill.  
 Craig—David Craig, Boston, Mass.  
 Diamond Disc, Diamond Mask—Hygeia Respirator Co., Inc., New York, N. Y.  
 Diamond Rubber Co., Inc., Akron, O.  
 Draeger—American Atmos Corp., Pittsburgh, Pa.



Draeger—Draeger Oxygen Apparatus Co., Pittsburgh, Pa.  
 Dustite—Merry Optical Co., Kansas City, Mo.  
 Dustite—Willson Goggles, Inc., Reading, Pa.  
 Elmer, H. N., Chicago, Ill.  
 Garnett, Herbert, Grand Rapids, Mich.  
 Hardy, F. A., & Co., Chicago, Ill.  
 Hayward, Midget, Automatic—Hayward & Co., S. F., New York, N. Y.  
 La France—American La France Fire Engine Co., Elmira, N. Y.  
 Lungmotor Co., Boston, Mass.  
 Pulmosan—Multi-Metal Separating Screen Co., New York.

**BESTS, HAND, FOR LATHES.**

American Tool & Machine Co., Boston, Mass.  
 ♦ McCrosky—The McCrosky Tool Corp., Meadville, Pa.

**BESTS, PIPE.**

Blake Specialty Co., Rock Island, Ill.  
 Edna Brass Mfg. Co., The Cincinnati, O.  
 Essex Foundry, Newark, N. J.  
 F. & M.—Fee & Mason Mfg. Co., New York, N. Y.  
 Loew Mfg. Co., Cleveland, O. (for threading machine).  
 Millers Falls Co., New York, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 Oberle—Jacob F. Oberle, New York, N. Y.  
 Oster—The Oster Mfg. Co., Cleveland, O. (for threading machines).  
 Triumph—J. W. Kellar, Chicago, Ill.  
 Tyler Underground Heating System, Pittsburgh, Pa.

**BESTS, SLIDE, FOR LATHES.**

American Tool & Machine Co., Boston, Mass.  
 Blount Co., J. C., Everett, Mass.  
 Oliver Mfg. Co., The W. W., Buffalo, N. Y.  
 Welch, T. F., & Co., Boston, Mass.

**BESTS, VALVE.**

Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 McCambridge Co., Philadelphia, Pa.  
 Mitchell & Van Meter Co., Philadelphia, Pa.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary Company of America, Linfield, Pa.

**RETARDERS, RAILROAD CAR.**

Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.

**RETORTS, CANNING.**

Portland Co., The, Portland, Me.

**RETORTS, LABORATORY.**

Griebel Instrument Co., Carbondale, Pa.

**RETORTS, SHALE OIL.**

The Plain Iron Works Co., Denver, Colo.

**RETORTS, WOOD STEAMING.**

Bancroft & Barnard, Gardner, Mass.  
 Perfection Wood-Steaming Retort Co., Parkersburg, W. Va.

**REVIVIFIERS, MOLDING SAND.**

Link-Belt Company, Chicago and Philadelphia.

**REOSTATS FOR TESTING BLASTING MACHINES.**

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont—Du Pont, E. I., De Nemours & Co., Wilmington, Del.  
 General Electric Co., Schenectady, N. Y.  
 Hercules Powder Co., Wilmington, Del.  
 H. & V. W.—Hanson & Van Winkle Co., Newark, N. J.  
 Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

**RIDDLES, FOUNDRY.**

Berkshire Mfg. Co., The, Cleveland, O.  
 Beyer Machine Co., Jackson, Mich.  
 Champion—Champion Foundry & Machine Co., The, Chicago, Ill.  
 Deane—The Deane Steam Pump Co., Holyoke, Mass.  
 Federal Foundry Supply Co., The, Cleveland, O.  
 Great Western Mfg. Co., Leavenworth, Kans.  
 Hill & Griffith Co., Cincinnati, O.  
 Howard & Morse, New York, N. Y.  
 Jelliff, C. O., Mfg. Corp., Southport, Conn.  
 Malleable Fittings Co., Branford, Conn. (Pneumatic).  
 Newark Wire Cloth Co., Newark, N. J.  
 Obermayer Co., S., Cincinnati, O.  
 Osborn Mfg. Co., Cleveland, O.  
 Tessmer Machine & Tool Co., Detroit, Mich.  
 The Grand—Beyer Machine Co., Jackson, Mich.  
 Tyler, W. S., Co., The, Cleveland, O.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**RING AND COVERS, COAL HOLE.**

Stuart Foundry Co., Detroit, Mich.

**RINGS, BATH SPRAY, RUBBER.**

Algco—Auburn Leather Goods Co., Auburn, N. Y.  
 Canfield Rubber Co., The, Bridgeport, Conn.

**RINGS, CLINCH.**

Illinois Malleable Iron Co., Chicago, Ill.  
 National Malleable Casting Co., The, Cleveland, O.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**RINGS, CLOSET FULL, RUBBER.**

Canfield Rubber Co., The, Bridgeport, Conn.

**RINGS, COPPER WIRE.**

Indestructible—U. S. Indestructible Gasket Co., New York, N. Y.

**RINGS, EXPANSION, HOSE COUPLING.**

Allen Fire Department Supply Co., Providence, R. I.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Seattle Brass Co., Seattle, Wash.  
 ♦ Sherman Mfg. Co., E. B., Battle Creek, Mich.

**RINGS, FELT, DUST EXCLUDING.**

Auburn Leather Goods Co., Auburn, N. Y.  
 Booth Felt Co., Inc., The, Brooklyn, N. Y.  
 Rebele, L. J., New York, N. Y.  
 Seattle Brass Co., Seattle, Wash.

**RINGS, FLUE.**

Indiana Foundry Co., Indiana, Pa.

**RINGS, OIL WELL.**

Diamond Rubber Co., Inc., The, Akron, O.  
 U. S. Indestructible Gasket Co., New York.

**RINGS, PIPE HANGING.**

Jumbo Heater & Mfg. Co., The, Cleveland, O.  
 Modern Mfg. Co., The, Cleveland, O.

**RINGS, PIPE PULLING.**

Watson-Stillman Co., The, New York, N. Y.

**RINGS, RANGE BOILER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Desper, H. A., & Co., Worcester, Mass.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary Company of America, Linfield, Pa.  
 Diamond Rubber Co., Inc., The, Akron, O.

**RINGS, SHAPING, LEATHER.**

♦ Graton & Knight Mfg. Co., Worcester, Mass.

**RINGS, SHOWER BATH.**

(See also "Baths, Shower.")

Art Brass Co., New York, N. Y.  
 Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
 Federal-Huber Co., Chicago, Ill.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Kelly—Thos. Kelly & Bro., Chicago, Ill.  
 ♦ Mechanical Rubber Co., The, Cleveland, O.  
 Smith Mfg. Co., E. C., Chicago, Ill.

**RINGS, SOIL PIPE TESTING, RUBBER.**

Canfield—H. O. Canfield Co., Bridgeport, Conn.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Mechanical Rubber Co., Chicago, Ill.  
 Woodward-Wanger Co., Philadelphia, Pa.

**RINGS, STEAM GAUGE.**

Waterbury Mfg. Co., Waterbury, Conn.

**RINGS, TANK AND PLUNGER, RUBBER.**

Canfield Rubber Co., The, Bridgeport, Conn.  
 Durst Mfg. Co., The, New York, N. Y.  
 Woodward-Wanger Co., Philadelphia, Pa.

**RINGS, VALVE.**

Garco Perfect—General Asbestos & Rubber Co., Charleston, S. C.

**RINGS, WIRE ROPE.**

(See "Fittings, Wire Rope.")

**RIVETER DIES, COMPRESSION.**

Heatproof—Geo. F. Marchant Co., Chicago, Ill.

**RIVETERS, ELECTRIC.**

Eveland Electric Riveter Co., Philadelphia, Pa.  
 Winfield—Winfield Electric Welding Machine Co., Warren, O.  
 Wodack—Wodack Electric Tool Corp., Chicago, Ill.

**RIVETERS, HYDRAULIC.**

- Albree Iron Works Co., Chester B., Allegheny, Pa.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Camden Iron Works, Camden, N. J.
- Chambersburg Engineering Co., Chambersburg, Pa.
- Chackintosh-Hemphill Co., Pittsburgh, Pa.
- Mesta Machine Co., Pittsburgh, Pa.
- Morgan Engineering Co., Alliance, O.
- Niles-Bement-Pond Co., New York.
- Sellers & Co., Inc., Wm., Philadelphia, Pa.
- Southwark Foundry & Machine Co., Philadelphia, Pa.
- Wickes Bros., Saginaw, Mich.
- Wood & Co., R. D., Philadelphia, Pa.
- Wood, William H., Media, Pa.

**RIVETERS, HYDRO-PNEUMATIC.**

- Hanna Engineering Works, Chicago, Ill.
- Pawling & Harinscheger, Milwaukee, Wis.
- Quincy, Manchester, Sargent Co., Plainfield, Pa.
- Stow Flexible Shaft Co., Philadelphia, Pa.

**RIVETERS, PNEUMATIC.**

(See also "Tools, Pneumatic.")

- Albree Iron Works Co., Chester B., Pittsburgh, Pa.
- Allen Co., John F., New York.
- Baird—Baird Pneumatic Tool Co., Kansas City, Mo.
- ◆ Boyer—Chicago Pneumatic Tool Co., New York, N.Y.
- Bliss Co., E. W., Brooklyn, N. Y.
- Canton—Canton Pneumatic Tool Co., Canton, O.
- Cleveland Pneumatic Tool Co., Cleveland, O.
- Dallet Co., Thos. H., Philadelphia, Pa.
- Dunlap—The Dunlap Mfg. Co., Columbus, O.
- Hanna—Hanna Engineering Wks., Chicago, Ill.
- Ingersoll-Rand Co., New York.
- ◆ Keller—Chicago Pneumatic Tool Co., New York, N. Y.
- Pittsburgh—The Pittsburgh Pneumatic Co., Canton, Ohio (hand pedestal yoke).
- Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.
- Slocumb, F. F., & Co., Wilmington, Del.
- Standard Railway Equipment Co., Chicago, Ill.
- Titan—Titan Automatic Tool Co., New York, N. Y.
- Waterbury Farrell Foundry & Machine Co., Waterbury, Conn.

**RIVETERS, STAKE.**

- Badger—Rock River Machine Co., Janesville, Wis.

**RIVETS, BOILER, TANK AND STRUCTURAL.**

- ◆ American Bolt Co., Birmingham, Ala.
- American Equipment Co., Norristown, Pa.
- Andrew Steel Co., The, Newport, Ky.
- Atlas—Atlas Bolt & Screw Co., Cleveland, O.
- Automatic Products Corp., Long Island City, N. Y.
- Baird Pneumatic Tool Co., Topeka, Kan.
- Bayonne Bolt & Nut Co., Bayonne, N. J.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Blake & Johnson Co., The, Waterbury, Conn.
- Boss Nut Co., Chicago, Ill.
- Boston Bolt & Iron Co., Boston, Mass.
- Buffalo Bolt Co., Buffalo, N. Y.
- Burden Iron Co., Troy, N. Y.
- Champion Rivet Co., Cleveland, O.
- Cobb & Drew, Inc., Plymouth, Mass.
- Columbus Bolt Works, Columbus, O.
- Continental Bolt & Iron Works, Chicago, Ill.
- Continental Wood Screw Co., New Bedford, Mass.
- Delaware Steel Co., New York, N. Y.
- Falls Rivet Co., Kent, O.
- Follansbee Bros. Co., Pittsburgh, Pa.
- Fort Pitt Forge Co., Pittsburgh, Pa.
- Gary Screw & Bolt Co., Chicago, Ill.
- Garland Mfg. Co., West Pittsburgh, Pa.
- ◆ Graham Nut Co., Pittsburgh, Pa.
- Hammond-Byrd Iron Co., Birmingham, Ala.
- Hoopes & Townsend Co., Philadelphia, Pa.
- Illinois Bolt, Nut & Forging Co., Chicago, Ill.
- Illinois Steel Warehouse Co., St. Louis, Mo.
- Inland Steel Co., Chicago, Ill.
- Interstate Iron & Steel Co., Chicago, Ill.
- Jones & Laughlin Steel Co., Pittsburgh, Pa.
- Kirk & Latty Mfg. Co., The, Cleveland, Ohio.
- ◆ Lamson & Sessions Co., The, Cleveland, O.
- ◆ Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- Lockhart Iron & Steel Co., Pittsburgh, Pa.
- McCalla, Harold Co., The, Philadelphia, Pa.
- Michigan Bolt & Nut Works, Detroit, Mich.
- National Bolt & Nut Co., Pittsburgh, Pa.
- National Supply Co., Baltimore, Md.
- Ohio Nut & Bolt Co., Berea, O.
- ◆ Oliver Iron & Steel Co., Pittsburgh, Pa.
- Pittsburgh Rivet Co., Pittsburgh, Pa.
- Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.
- Republie Iron & Steel Co., Pittsburgh, Pa.
- ◆ Russell, Burdall & Ward Bolt & Nut Co., Port Chester, Pa.
- Scully Car Forge Co., Pittsburgh, Pa.
- Specialty Bolt & Rivet Works, Shelton, Conn.
- Steel Car Forge Co., Pittsburgh, Pa.
- Tower Mfg. Co., Madison, Ind.

- Townsend Co., C. C. & E. F., New Brighton, Pa.
- ◆ Upon Nut Co., Cleveland, O.
- Wonder—Hardsocg Wonder Drill Co., Ottumwa, Ia.

**RIVETS AND BURRS, BRASS AND COPPER.**

- American Screw Co., Providence, R. I.
- Atlas Bolt & Screw Co., Cleveland, Ohio.
- Atlas Tack Corp., Fairhaven, Mass.
- Blake & Johnson Co., The, Waterbury, Conn.
- C. R. & S.—Chicago Rivet & Specialty Co., Chicago, Ill.
- Clark Bros. Bolt Co., Inc., Milldale, Conn.
- Clendennin Bros., Inc., Baltimore, Md.
- Cleveland Wrought Products Co., Cleveland, O.
- Cobb & Drew, Inc., Plymouth, Mass.
- Falls Rivet Co., Kent, O.
- Federal—Federal Asbestos Co., Paterson, N. J. (Split.)
- Gaskell, Wm. & Son, Brooklyn, N. Y.
- Grammes, L. F. & Sons, Allentown, Pa.
- Hassall, John, Inc., Brooklyn, N. Y.
- Hercules—Hercules Belt Lacer Mfg. Co., Chicago, Ill.
- Hussey, C. G., & Co., Pittsburgh, Pa.
- Ideal—W. O. & M. W. Talcott, Providence, R. I.
- Igoe Brothers, Newark, N. J.
- Latschaw Steel & Metal Products Corp., New York, N. Y.
- Manufacturers Belt Hook Co., Chicago, Ill.
- National Screw & Tack Co., Cleveland, O.
- Nelson Rivet Co., Taunton, Mass.
- North American Copper Co., New York, N. Y.
- Pawtucket Mfg. Co., Pawtucket, R. I.
- Pheoli Mfg. Co., Chicago, Ill.
- Phoenix Specialty Mfg. Co., New York, N. Y.
- Plume & Atwood Mfg. Co., Waterbury, Conn.
- Rome Brass & Copper Co., Rome, N. Y.
- Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.
- Stimpson, Edwin B., Co., Brooklyn, N. Y.
- Taunton Rivet Works, Taunton, Mass.
- Waterbury Mfg. Co., Waterbury, Conn.

**RIVETS, GALVANIZED.**

- Rockford Bolt Co., Rockford, Ill.

**RIVETS, REPAIR, SOFT METAL.**

- Peck, E. E., & Co., Medina, N. Y.

**RIVETS, TUBULAR AND BIFURCATED.**

- C. R. & S.—Chicago Rivet Specialty Co., Chicago, Ill.
- Crescent—Crescent Belt Fastener Co., Inc., New York, N. Y.
- Equipoise Rivet Co., Waterbury, Conn.
- Manufacturers Belt Hook Co., Chicago, Ill.
- Nelson Rivet Co., Taunton, Mass.
- Stimpson, Edwin B., Co., Brooklyn, N. Y.
- Thomson, Judson L., Mfg. Co., Waltham, Mass.
- ◆ Tubular Rivet & Stud Co., Boston, Mass.

**ROCKERS, CARBOY.**

- Grammes, L. F. & Sons, Allentown, Pa.
- Hanson & Van Winkle Co., Newark, N. J.

**ROD ENDS.**

- ◆ Williams, J. H., & Co., Brooklyn, N. Y.

**RODS, BRASS, BRONZE & COPPER.**

(See Brass Rods, Bronze Rods and Copper Rods.)

**RODS, BRIDGE AND ROOF.**

- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Continental Bolt & Iron Works, Chicago, Ill.
- Delaware Steel Co., New York, N. Y.
- Lebanon Valley Iron & Steel Co., Lebanon, Pa.
- O'Leary, Arthur J., & Son Co., Chicago, Ill.
- St. Louis Screw Co., St. Louis, Mo.

**RODS, CLOSET FLOAT, AND WIRES, TANK BULB.**

- Chicago Nut Co., Chicago, Ill.
- Frank Bros., New York, N. Y.
- Hindley Mfg. Co., Valley Falls, R. I.
- Richards, Benjamin, & Co., Winsted, Conn.
- Try-Me Mfg. Co., Westfield, Mass.
- Woodward-Wanger Co., Philadelphia, Pa.

**RODS, CONDUIT.**

- Empire, Diamond—Diamond Expansion Bolt Co., New York, N. Y.
- Security—Bissell, F., Co., The, Toledo, O.

**RODS, CONNECTING.**

- Bay City Forge Co., Erie, Pa.
- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Carnegie Steel Co., Pittsburgh, Pa.
- Columbus Forge & Iron Co., Columbus, O.
- Erie Forge Co., Erie, Pa.
- Kraeuter & Co., Inc., Newark, N. J.
- Leard, Wm., Co., New Brighton, Pa.

Mesta Machine Co., Pittsburgh, Pa.  
 Richmond Forgings Corp., Richmond, Va.  
 Standard Gauge Steel Co., Beaver Falls, Pa.  
 ♦ Williams, J. H., & Co., Brooklyn, N. Y.

**RODS, DRILL.**

(For Twist Drills, Reamers, Etc.)

(See also "Steel, Tool.")

Ajax, Invincible, Unita—Kidd Drawn Steel Co., All-quippa, Pa.  
 Blancke Co., Inc., L. C., New York, N. Y.  
 Delaware Steel Co., New York, N. Y.  
 Halcomb Steel Co., Syracuse, N. Y.  
 International High Speed Steel Co., New York, N. Y.  
 Monaca Reliance—Pittsburgh Tool Steel Wire Co., Monaca, Pa.  
 National Drawn Steel Co., The, East Liverpool, O.  
 Superior & Star—Peter A. Frasse & Co., Inc., New York.  
 Wickwire Spencer Steel Corp., Worcester, Mass.

**RODS, DRILL (WELL).**

N. T. C.—National Tube Co., Pittsburgh, Pa.

**RODS, EXTENSION AND COUPLING.**

Columbus Brass Co., Columbus, O.

**RODS, FLOAT.**

Frost Mfg. Co., The, Kenosha, Wis.

**RODS, FLUE CLEANER.**

Butman—M. B. Skinner, Chicago, Ill.

**RODS, GUY, TIE AND UPSET.**

♦ American Bolt Co., Birmingham, Ala.  
 American Equipment Co., Norristown, Pa.  
 Ames & Co., W., Jersey City, N. J.  
 Bayonne Bolt & Nut Co., Bayonne, N. J.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Brooklyn Bolt & Forging Co., East Stroudsburg, Pa.  
 McGookin, D. H., Philadelphia.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 National Bolt & Nut Co., Pittsburgh, Pa.  
 New England Bolt Co., Inc., Everett, Mass.  
 O'Leary, Arthur J., & Son, Co., Chicago, Ill.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 Pittsburgh Rivet Co., Pittsburgh, Pa.  
 ♦ Republic Iron & Steel Co., Youngstown, O.  
 St. Louis Screw Co., St. Louis, Mo.  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 U. W.—The Upson-Walton Co., Cleveland, O.  
 ♦ Youngstown Sheet & Tube Co., Youngstown, O.

**RODS, HYDRANT.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Hauer, J. B., Brooklyn, N. Y.  
 Hays Mfg. Co., Erie, Pa.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanitary Company of America, Linfield, Pa.

**RODS, LEVELING.**

Gurley—W. &amp; L. E. Gurley, Troy, N. Y.

**RODS, MANGANESE BRONZE.**

American Manganese Bronze Co., New York.  
 Taunton-New Bedford Copper Co., Taunton, Mass.

**RODS, OIL WELL.**

Norris, W. C., Tulsa, Okla.

**RODS, PIPE.**

♦ Bethlehem Steel Co., Bethlehem, Pa.

**RODS, PISTON.**

♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
 Marine Bronze—The Randolph-Clowes Co., Waterbury, Conn.  
 Sizer Forge Co., Buffalo, N. Y.  
 United Alloy Steel Corp., Canton, O.

**RODS, PULL, OIL WELL.**

Norris, W. C., Tulsa, Okla.

**RODS, PUMP, DEEP WELL.**

A. D. Cook, Inc., Lawrenceburg, Ind.

**RODS, REINFORCING.**

(See "Steel, Concrete Reinforcement.")

**RODS, SEWER CLEANING.**

(See "Cleaners, Sewer.")

Axelson Machine Co., Los Angeles, Cal.  
 Coleman's Flexible Coil Wire—Allan J. Coleman, Chicago, Ill.

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 E. Z.—Talz, Jacob, & Son, Philadelphia, Pa.  
 Felton—Harold L. Bond Co., Boston.  
 Fraw, E. C., Cleveland, O.  
 Hause—Chas. F. Hause Mfg. Co., Inc., Omaha, Neb.  
 National Tool Co., Brooklyn, N. Y.  
 Security (Jointed)—The F. Bissell Co., Toledo, O.

**RODS, SILO.**

Gary Screw &amp; Bolt Co., Gary, Ill.

**RODS, STEEL WIRE.**

Interstate Iron &amp; Steel Co., Chicago, Ill.

**RODS, SUCKER, OIL WELL.**

Axelson—Axelson Machine Co., Los Angeles, Cal.  
 Jones, S. M. Co., The, Toledo, O.  
 Norris, W. C., Tulsa, Okla.  
 National Drawn Steel Co., The, East Liverpool, O.  
 ♦ Pittsburgh Perfection—Pittsburgh Steel Co., Pittsburgh, Pa.  
 Pittsburgh Tool Steel Wire Co., Monaca, Pa.

**RODS, THREADED.**

Acheson Mfg. Co., Braddock, Pa.  
 Buffalo Nipple & Machine Co., Inc., Buffalo, N. Y.  
 Pheoll Mfg. Co., Chicago, Ill.  
 St. Louis Screw Co., St. Louis, Mo.  
 Western Screw Products Co., St. Louis, Mo.

**RODS AND WIRE, WELDING.**

Admiral—Admiral Welding Machine Co., Kansas City, Mo.  
 Air Reduction Sales Co., New York, N. Y.  
 Apex Steel Corp., New York, N. Y.  
 Chicago Hardware Fdy. Co., Chicago, Ill.  
 Economy—Economy Welding Machine Co., Kansas City, Mo.  
 Federal Tool & Alloy Steel Corp., Brooklyn, N. Y.  
 Gale Mfg. Co., Albion, Mich.  
 Eagle Smelting & Refining Works, New York, N. Y.  
 Imperial Brass Mfg. Co., Chicago, Ill.  
 Lathaw Steel & Metal Products Corp., New York, N. Y.  
 Macleod Co., Cincinnati, O.  
 Metal & Thermit Corp., New York, N. Y.  
 Milburn, Alexander, Co., The, Baltimore, Md.  
 T. T.—Metal Products & Sup. Co., Philadelphia, Pa.  
 Taunton-New Bedford Copper Co., Taunton, Mass.  
 Weld Wire Co., The, Brooklyn, N. Y.  
 Western Drop Forge Works, Marion, O.  
 Wilson Welder & Metals Co., Brooklyn, N. Y.  
 Wilson, W. S., Corp., New York.

**ROLLERS, CONVEYORS, ADJUSTABLE.**

Main Belting Co., Philadelphia, Pa.

**ROLLERS, LUMBER, CAR DOOR.**

Advance—Advance Car Mover Co., Appleton, Wis.  
 Oshkosh Mfg. Co., Oshkosh, Wis.

**ROLLERS AND PINS, PIPE CUTTER.**

Collmer Bros., South Bend, Ind.

**ROLLERS, ROAD.**

Acme Road Machinery, Frankfort, N. Y.  
 Arnold—Arnold's, G. W., Son, Ionia, Mich.  
 Buffalo Steam Roller Co., Buffalo, N. Y.  
 Davis & Farnum Mfg. Co., Waltham, Mass.  
 Huber—Huber Mfg. Co., The, Marion, O.  
 Indiana Road Machine Co., Ft. Wayne, Ind.  
 Iroquois—The Barber Asphalt Paving Co., Philadelphia, Pa.  
 Monarch—Good Roads Machinery Co., Kennett Square, Pa.  
 Monarch—Monarch Road Roller Co., Groton, N. Y.  
 Port Huron Engine & Thresher Co., Port Huron, Mich.  
 Vulcan Iron Works, Chicago, Ill.

**ROLLERS, STITCHERS AND TIRE TOOLS.**

Hoggson &amp; Pettis Mfg. Co., The, New Haven, Conn.

**ROLLERS, TIE, COTTON BALE.**

Howlett—P. L. Howlett, Brownwood, Tex.

**ROLLS, BENDING AND STRAIGHTENING.**

Badger State Machine Works, Beloit, Wis.  
 Bertsch & Co., Cambridge City, Ind.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 Cincinnati Punch & Shear Co., Cincinnati, O.  
 Cleveland Punch & Sheet Works Co., Cleveland, Ohio.  
 Covington Machine Co., Covington, Va.  
 Hendley & Whittemore Co., Beloit, Wis.  
 Hillis & Jones Co., Wilmington, Del.  
 Long & Allstatler Co., Hamilton, O.  
 McCabe, J. J., Lathe & Machy. Corp., New York, N. Y.

Morgan Engineering Co., Alliance, O.  
 National Roll & Foundry Co., Avonmore, Pa.  
 New Doty Mfg. Co., Janesville, Wis.  
 Niles-Bement-Pond Co., New York City.  
 Perkins Machine Co., Warren, Mass.  
 Rock River Machine Co., Janesville, Wis.  
 Seaman, Sleeth Co., Pittsburgh, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.  
 United Engineering & Fdy. Co., Pittsburgh, Pa.  
 Wickes Bros., Saginaw, Mich.  
 Williams, White & Co., Moline, Ill.

#### ROLLS, CHILLED, SAND AND ADAMITE.

Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa.  
 Blake & Johnson Co., Waterbury, Conn.  
 Bethlehem Steel Co., South Bethlehem, Pa.  
 Farrell Foundry & Machine Co., Ansonia, Conn.  
 Garrison Foundry Co., Pittsburg, Pa.  
 Lobdell Car Wheel Co., Wilmington, Del.  
 Mackintosh, Hemphill & Co., Pittsburgh, Pa.  
 Mesta Mach. Co., Pittsburgh, Pa.  
 National Roll & Foundry Co., Avonmore, Pa.  
 Phoenix Metal—Pittsburg Rolls Corp., Pittsburg, Pa.  
 Seaman, Sleeth Co., Pittsburgh, Pa.  
 Standard Engineering Co., Ellwood City, Pa.  
 United Engineering & Foundry Co., Pittsburg, Pa.  
 Waterbury Farrell Foundry & Machine Co., Waterbury, Conn.  
 Wetherill & Co., Robert, Chester, Pa.  
 Wheeling Mould & Foundry Co., Wheeling, W. Va.  
 Youngstown Foundry & Machine Co., The, Youngstown, O.

#### ROLLS, COPPER.

Rome Brass & Copper Co., Rome, N. Y.

#### ROLLS, CRUSHING.

Barnard & Leas Mfg. Co., Moline, Ill.  
 Buchanan—C. G. Buchanan Co., Inc., New York, N. Y.  
 Buckeye—Buckeye Iron & Brass Works, Dayton, Ohio.  
 Link-Belt Company, Chicago and Philadelphia.  
 New Holland—New Holland Machine Co., New Holland, Pa.  
 Power & Mining Machinery Co., New York.  
 Simpson, Orville, Co., The, Cincinnati, O. (grain).  
 Stroud, F. H., & Co., Chicago, Ill.  
 United Alloy Steel Corp., Canton, O.  
 Wilmot—Wilmot Engineering Co., Hazleton, Pa.  
 Wolf Co., The, Chambersburg, Pa.

#### ROLLS, CURVING AND CORRUGATING.

Badger—Rock River Machine Co., Janesville, Wis.  
 Canton Foundry & Machine Co., Canton, O.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Ohl & Co., Geo. A., Newark, N. J.  
 Poorman—Streine Tool & Mfg. Co., New Bremen, O.  
 Toledo Machine & Tool Co., The, Toledo, O.

#### ROLLS, FORGING, AND SCRAP RECLAIMING.

Ajax Manufacturing Co., Cleveland, O.

#### ROLLS, KNIFE, AUTOMATIC.

New Britain—New Britain Machine Co., The, New Britain, Conn.

#### ROLLS OR CYLINDERS, FOR PAPER, SOAP AND LAUNDRY MACHINERY.

Warren Foundry & Machine Co., New York, N. Y.

#### ROLLS, PIPE HANGER.

Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 Bemanco—A. J. Beaton Mfg. Co., New Britain, Conn.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Newbury Mfg. Co., Monroe, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Walworth Mfg. Co., Boston, Mass.

#### ROLLS, RUBBER COVERED.

Boston Belting Co., Boston, Mass.  
 Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
 Diamond Rubber Co., The, Akron, O.  
 Vail Rubber Co., Chicago, Ill.

#### ROLLS, SUCTION AND VACUUM.

Farnham Mfg. Co., Buffalo, N. Y.

#### ROOFING AND SIDING, ASBESTOS.

Bramco-bestos—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Carey Co., Phillip, Lockland, O.  
 Chicago Fire Proof Covering Co., Chicago, Ill.  
 Dominion—Dominion Asbestos and Rubber Corp., New York, N. Y.

Duckback—Asbestos Protected Metal Co., Beaver Falls, Pa.  
 Ehret Magnesia Mfg. Co., Philadelphia, Pa.  
 Johns-Manville, Incorporated, New York.  
 K. & M.—Keasbey & Mattison Co., Ambler, Pa.  
 Midland Asbestos Mfg. Co., Kansas City, Mo.  
 Mikesell Brothers Co., Chicago, Ill.  
 Reliance—Sall Mount in Asbestos Mfg. Co., Chicago, Ill.  
 Sawyer's—The American Insulating Material Mfg. Co., Alexandria, Ind.  
 White Seal, Fire Chief—Watson Co., H. F., Erie, Pa.

#### ROOFING, COPPER BEARING STEEL.

Youngstown Copperoid Steel—Youngstown Sheet & Tube Co., Youngstown, O.

#### ROOFING, IRON AND STEEL.

(See also "Sheets, Iron and Steel.")

American Rolling Mill Co., Middletown, O.  
 Apollo—American Sheet & Tin Plate Co., Pittsburgh.  
 Berger Mfg. Co., Canton, O.  
 Canton Art Metal Co., Canton, O.  
 Chattanooga Roofing & Fdy. Co., Chattanooga, Tenn.  
 De Forest Sheet & Tin Plate Co., Niles, O.  
 Delphos Mfg. Co., Delphos, O.  
 Eller Mfg. Co., Canton, Ohio.  
 Empire Iron & Steel Co., Niles, O.  
 Globe—Globe Iron Roofing & Corrugating Co., Cincinnati, O.  
 Hyndman Roofing Co., Cincinnati, O.  
 Inland Steel Co., Chicago, Ill.  
 La Belle Iron Works, Steubenville, O.  
 Lyon Brand—Lyon, Conklin & Co., Inc., Baltimore, Md.  
 Massillon Rolling Mill Co., Massillon, O.  
 Milcor—Milwaukee Corrugating Co., Milwaukee, Wis.  
 Mobile Steel Co., Mobile, Ala.  
 Newport Rolling Mill Co., Newport, Ky.  
 New Process Roofing & Supply Co., Dallas, Tex.  
 New Process—Youngstown Sheet & Tube Co., The, Youngstown, O.  
 O. K. Harry—O. K. Harry Steel Co., St. Louis, Mo.  
 Robertson Process—H. H. Robertson Co., Pittsburgh, Pa.  
 Ryerson, Joseph T., & Son, Chicago, Ill.  
 Seneca—Seneca Iron & Steel Co., Buffalo, N. Y.  
 Thomas Steel Co., Niles, O.  
 Toncan Metal—Stark Rolling Mill Co., Canton, O.  
 Trumbull Steel Co., The, Warren, O.  
 Weather-Wear—Cersit Waterproofing Co., Chicago, Ill.  
 Wheeling Corrugating Co., Wheeling, W. Va.  
 Whitaker-Glessner Co., Wheeling, W. Va.  
 Youngstown, New Process—Youngstown Sheet & Tube Co., The, Youngstown, O.

#### ROOFING, PREPARED.

Aduro, Reliance, Sal-Mo—Sall Mountain Co., Chicago, Ill.  
 Anchor—Warren Chemical Div., The Barrett Co., New York, N. Y.  
 Asfaltlate, Elastite, Firefter, Philco—Philip Carey Mfg. Co., Cincinnati, O.  
 Asphalt Ready Roofing Co., New York, N. Y.  
 Barrett Mfg. Co., New York, N. Y.  
 Beckman-Dawson Roofing Co., Chicago, Ill.  
 Boyle, John, & Co., Inc., New York, N. Y.  
 Burton Co., The, W. J., Detroit, Mich.  
 Carey—Philip Carey Mfg. Co., Cincinnati, O.  
 Eclipse—Fairbanks, Morse & Co., Chicago, Ill.  
 Galvanite—Ford Roofing Products Co., Chicago, Ill.  
 Genasco—The Barber Asphalt Paving Co., Philadelphia, Pa.  
 Granite—Warren Chemical Div., The Barrett Co., New York, N. Y.  
 Guardian—Flintkote Co., The, Boston, Mass.  
 Heppes-Nelson Roofing Co., Chicago, Ill.  
 Trade-names—Flex-a-tile, Flexo, Nuroid, Success, Richardson, Rubbertex, Wallboard.  
 Hydrex, Pluvinox—Hydrex Asphalt Products Corp., New York, N. Y.  
 Imperial, Induruid, Keystone, Red Rope, Silicoat, W. B.—F. H. Watson, Erie, Pa.  
 Jarez, Rex—Flintkote Mfg. Co., Boston, Mass.  
 J-M Regal—H. W. Johns-Manville Co., New York, N. Y.  
 Marley-Niagara—C. S. Garrett & Son Co., Philadelphia, Pa.  
 Maryland Asbestos Co., Baltimore, Md.  
 Mule Hide—Lehon Co., The, Chicago, Ill.  
 Neponset—Bird & Son, Inc., East Walpole, Mass.  
 Neverleak, Fulleroid—Fuller Brothers & Co., New York, N. Y.  
 O. K. Harry Steel Co., St. Louis, Mo.  
 Paradux (canvas)—Flintkote Mfg. Co., Boston, Mass.  
 Paramount—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Parla—Warren Chemical Div., The Barrett Co., New York, N. Y.  
 Piper Roofing & Mfg. Co., Richmond, Va.  
 Puro, Pioneer, Bramkote, Gold Medal, Shore Brand, Slate Surface—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Regal—Johns-Manville, Inc., New York, N. Y.  
 Robertson Process—H. H. Robertson Co., Pittsburgh, Pa.

Ruber—Mobile Steel Co., Mobile, Ala.  
 Ru-ber-oid—Standard Paint Co., New York, N. Y.  
 Security—National Roofing Co., Tonawanda, N. Y.  
 Steadfast—Flintkote Co., The, Boston, Mass.  
 Sun-Shine—The Lehon Co., Chicago, Ill.  
 Taylor Co., F. & C., Philadelphia, Pa.  
 Tile-Tite—Warren Chemical Div., The Barrett Co., New York, N. Y.  
 Underfelt—McClellan Paper Co., Minneapolis, Minn.  
 Union Roofing & Mfg. Co., St. Paul, Minn.  
 Vulcanite—Patent Vulcanite Roofing Co., Chicago, Ill.

**ROOFING, SLATE.**

(See also "Slate.")

Bangor Structural Slate Co., Bangor, Pa.  
 East Bangor Consolidated Slate Co., East Bangor, Pa.  
 Eureka Slate Quarries, Fair Haven, Vt.  
 Johnson, E. J., New York.  
 Lobb, Parry & Co., Danielsville, Pa.  
 Miller Slate Co., O. A., Slatonington, Pa.  
 Pennsylvania Structural Slate Co., Easton, Pa.  
 Vandro Slate Co., Inc., Bangor, Pa.

**ROOFING, TIN AND TERNE.**

- ◆ American Old Style, MF—American Sheet & Tin Plate Co., Pittsburgh, Pa.
- ◆ Chattanooga Roofing & Fdy. Co., Chattanooga, Tenn.
- ◆ Continuous—American Sheet & Tin Plate Co., Pittsburgh, Pa.
- ◆ Corco—Wheeling Corrugating Co., Wheeling, W. Va.
- ◆ Follansbee Brothers Co., Pittsburgh, Pa.
- ◆ La Belle Iron Works, Steubenville, O.
- ◆ Lyon, Conklin & Co., Inc., Baltimore, Md.
- ◆ Merchant & Evans Co., Inc., Philadelphia, Pa. Trade Names — Old Method, Old Style, American Old Style, A. B. C., Liberty, Sheldon, La Salle, Western, Palm.
- ◆ Meurer Bros. Co., Brooklyn, N. Y.
- ◆ M. F.—American Sheet & Tin Plate Co., Pittsburgh.
- ◆ Mobile Steel Co., Mobile, Ala.
- ◆ National Sheet Metal Roofing Co., Jersey City, N. J.
- ◆ Taylor, N. & G. Co., Philadelphia, Pa.
- ◆ U. S. Eagle—American Sheet & Tin Plate Co., Pittsburgh, Pa.
- ◆ Youngstown Sheet & Tube Co., Youngstown, O.

**ROCKS, SAND BLAST.**

Hoevel Mfg. Corp., Jersey City, N. J.  
 Pangborn Corp., Hagerstown, Md.  
 Sly, W. W., Mfg. Co., Cleveland, O.

**ROPE, COTTON.**

The Massoit Mfg. Co., Fall River, Mass.

**ROPE DRIVES, TRANSMISSION.**

(See also "Machinery, Power Transmission," and "Sheaves.")

- ◆ Dodge Mfg. Co., Mishawaka, Ind.
- ◆ Columbian—Columbian Rope Co., Auburn, N. Y.
- ◆ Falls Rivet & Machinery Co., Cuyahoga Falls, O.
- ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.
- ◆ Mill Clutch Co., The, Cleveland, O.
- ◆ Link-Belt Company, Chicago and Philadelphia.
- ◆ Webster Mfg. Co., Tiffin, O.
- ◆ Wolf Co., The, Chambersburg, Pa.
- ◆ Woods, T. B., Sons Co., Chambersburg, Pa.

**ROPE, JUTE.**

American Mill Co., The, Atlanta, Ga.  
 American—The American Mfg. Co., New York, N. Y.  
 Chelsea Fibre Mills, New York, N. Y.  
 Eureka—Columbian Rope Co., Auburn, N. Y.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 U. W.—The Upson-Walton Co., Cleveland, O.  
 Winne, Frank W., & Son, Inc., Philadelphia, Pa.

**ROPE, KRAFT, PAPER.**

Baeder-Adamson Co., Philadelphia, Pa.

**ROPE, LEAD.**

Ulco—United Lead Co., New York, N. Y.

**ROPE, MANILA.**

American Mill Co., Atlanta, Ga.  
 Allen & Sons Rope Co., D., Brooklyn, N. Y.  
 American—The American Mfg. Co., New York, N. Y.  
 American, Bolt Rope—St. Louis Cordage Mills, St. Louis, Mo.  
 Central Rope Mfg. Co., Brooklyn, N. Y.  
 Columbian Regal—Columbian Rope Co., Auburn, N. Y.  
 Eureka—Columbian Rope Co., Auburn, N. Y.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Fittler Co., The Edwin H., Philadelphia, Pa. (holsting).  
 Hoffmann-Corr Mfg. Co., New York, N. Y.  
 H. & A., Blue Heart—Hooven & Allison Co., Xenia, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 New Bedford Cordage Co., New Bedford, Mass.  
 Nycord—The New York Cordage Co., New York, N. Y.  
 Rakco—Kelly Co., R. A., Xenia, O.  
 Rugg, E. T., & Co., Newark, Ohio. Trade names—

**WIRE ROPE***of every description—for every purpose*

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**Bolts** **Wire** **Washers**  
**Nails** **Turnbuckles**

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Ocean Brand, Marine, Champion.  
 Stevedore—C. W. Hunt Co., New York, N. Y.  
 U-W Marine—Upson-Walton Co., Cleveland, O.  
 Wall—Wall Rope Works, New York, N. Y.  
 ◆ Waterbury Co., New York, N. Y.  
 ◆ Whitlock—Whitlock Cordage Co., New York, N. Y.  
 Winne, Frank W., & Son, Inc., Philadelphia, Pa.

**ROPE, MARLIN COVERED.**

- Durable—Durable Wire Rope Co., Boston, Mass.
- ◆ Fibreclad—Waterbury Co., New York, N. Y.
- Fischer & Hayes Rope & Steel Co., Chicago, Ill.

**ROPE, RAWHIDE.**

- Chicago Rawhide Mfg. Co., The, Chicago, Ill.
- ◆ Schieren's—Chas. A. Schieren Co., New York.

**ROPE, SISAL.**

- American Mill Co., Atlanta, Ga.
- American—The American Mfg. Co., New York, N. Y.
- Columbian Eureka—Columbian Rope Co., Auburn, N. Y.
- Diamond—Waterbury Co., New York, N. Y.
- Eureka—Columbian Rope Co., Auburn, N. Y.
- Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- Fittler, Edwin H., Co., The, Philadelphia, Pa.
- Kelly, R. A., Co., Xenia, O.
- Nycord—New York Cordage Co., The, New York.
- Royal—St. Louis Cordage Mills, St. Louis, Mo.
- Rugg, E. T., & Co., Newark, Ohio. Trade names—Ocean, Champion.
- U. W.—The Upson-Walton Co., Cleveland, O.
- ◆ Waterbury Co., New York, N. Y.
- ◆ Whitlock—Whitlock Cordage Co., New York, N. Y.
- Winne, Frank W., & Son, Inc., Philadelphia, Pa.

**ROPE, SWITCH, WIRE.**

Fischer & Hayes Rope & Steel Co., Chicago, Ill.

**ROPES, TOW.**

Baseline, Autowline, Powersteel, Truckline—Broderick & Bascom Rope Co., St. Louis, Mo.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.

**ROPE, TRANSMISSION.**

- American—The American Mfg. Co., New York, N. Y.
- American—St. Louis Cordage Mills, St. Louis, Mo.
- Anniston Cordage Co., Anniston, Ala.
- Caldwell & Son Co., H. W., Chicago, Ill.
- Columbian Tape-Marked—Columbian Rope Co., Auburn, N. Y.
- ◆ Firmus—Dodge Sales & Engineering Co., Mishawaka, Ind.
- Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- Fittler Co., The Edwin H., Philadelphia, Pa.
- Jupiter—Durable Wire Rope Co., Boston, Mass.
- Lambeth—Lambeth Rope Corp., New Bedford, Mass.
- ◆ Leschen's Best—A. Leschen & Sons Rope Co., St. Louis, Mo.
- Link-Belt Company, Chicago and Philadelphia.
- Nycord—The New York Cordage Co., New York, N. Y.
- Old Colony—Geo. B. Carpenter Co., Chicago, Ill.
- Ranville, F. Co., Grand Rapids, Mich.
- ◆ Reliance—Waterbury Co., New York, N. Y.
- U. W.—The Upson-Walton Co., Cleveland, O.
- ◆ Waterbury Co., New York, N. Y.
- ◆ Whitlock—Whitlock Cordage Co., New York, N. Y.
- Winne, Frank W., & Son, Inc., Philadelphia, Pa.
- Wood's Sons Co., T. B., Chambersburg, Pa.

**ROPE, WIRE.**

- ◆ American—American Steel & Wire Co., Chicago, Ill.
- Cable, Wm., Excelsior Wire Mfg. Co., The, Brooklyn, N. Y.
- ◆ Crucible Steel—Broderick & Bascom Rope Co., St. Louis, Mo.
- Delaware Steel Co., New York.

*"Where Quality Counts"*

## Mechanical Rubber Goods

Inner Tubes      Asbestos Materials

UNION RUBBER & ASBESTOS COMPANY

Trenton, N. J.

- Driver-Harris Wire Co., Harrison, N. J.
- Durable Wire Rope Co., Boston, Mass.
- Eclipse—Fairbanks, Morse & Co., Chicago, Ill.
- Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- Galvd & Galvd Strand—Broderick & Bascom Rope Co., St. Louis, Mo.
- Giant Green Strand—Waterbury Co., New York, N. Y.
- Gore Patent—Waterbury Co., New York, N. Y.
- Hazard—Hazard Mfg. Co., Wilkesbarre, Pa.
- Hercules—A. Leichen & Sons Rope Co., St. Louis, Mo. (Red-Strand.)
- Killindo Non-Rotating—Macomber & Whyte Rope Co., Kenosha, Wis.
- Mac Whyte—Macomber & Whyte Rope Co., Kenosha, Wis.
- Monarch—Macomber & Whyte Rope Co., Kenosha, Wis.
- Moon, George C., Co., Garwood, N. J.
- Olympic—Hazard Mfg. Co., Wilkes Barre, Pa.
- Oshkosh Mfg. Co., Oshkosh, Wis.
- Patent Steel—Broderick & Bascom Rope Co., St. Louis, Mo.
- Perfection, Upson-Walton—Upson-Walton Co., Cleveland, O.
- Plow Steel—Broderick & Bascom Rope Co., St. Louis, Mo.
- Roebing—John A. Roebing's Sons Co., Trenton, N. J.
- Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.
- Telfax—Williamsport Wire Rope Co., Williamsport, Pa.
- U. W.—The Upson-Walton Co., Cleveland, O.
- Waterbury Co., New York, N. Y.
- Wickwire Spencer Steel Corp., New York, N. Y.
- Williamsport Wire Rope Co., Williamsport, Pa.
- Wycore—Macomber & Whyte Rope Co., Kenosha, Wis.
- Yellow Strand—Broderick & Bascom Rope Co., St. Louis, Mo.

### RUBBER GOODS, MECHANICAL AND MOLDED.

(See "Belting," "Hose," "Packing," "Washers," etc.)

- Andrew Bell, Estate of, Newark, N. J.
- Boston Belting Corp., Boston, Mass.
- Canfield, H. O., Co., The, Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn.
- Central Rubber Co., The, Philadelphia, Pa.
- Cincinnati Rubber Mfg. Co., Cincinnati, O.
- Continental Rubber Works, Erie, Pa.
- Diamond Rubber Co., The, Akron, O.
- Dominion Asbestos and Rubber Corp., New York, N. Y.
- Essex—Essex Rubber Co., Trenton, N. J.
- Gillette Rubber Co., New York, N. Y.
- Goodyear Tire & Rubber Co., Akron, O.
- Hewitt Rubber Co., Buffalo, N. Y.
- Hudson Mechanical Rubber Co., The, New York, N. Y.
- Johnson, The Henry Co., Jersey City, N. J.
- La Favorite Rubber Mfg. Co., Paterson, N. J.
- Pioneer Rubber Mills, San Francisco, Calif.
- Portland Rubber Mills, Portland, Ore.
- Republic Rubber Co., The, Youngstown, O.
- Salisbury & Co., Inc., W. H., Chicago, Ill.
- Schacht Rubber Mfg. Co., Huntington, Ind.
- United States Rubber Co., Mechanical Goods Division, New York.
- United & Globe Rubber Mfg. Co., Trenton, N. J.
- Wilbow—The Williams-Bowman Rubber Co., Cicero, Ill.

### RUBBER GOODS, PLUMBING.

(See also "Balls," "Elbows," "Washers," Etc.)

- Algo—Auburn Leather Goods Co., Auburn, N. Y.
- Andrew Bell, Estate of, Newark, N. J.
- H. O. Canfield Co., Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn. "Red-tex," "Black Rock," "Compo Red," "Compo Black"
- Diamond—The Diamond Rubber Co., Akron, O.
- Dumaco—Durst Mfg. Co., New York, N. Y.
- Elkhart Rubber Works, Elkhart, Ind.
- Frank Bros., New York.
- Good Mfg. Co., Inc., New York, N. Y.
- Goodrich Rubber Co., The B. F., Akron, O.
- Hause—Chas. F. Hause Mfg. Co., Omaha, Neb.
- Helland—The Garrison Brass & Machine Works, New York, N. Y.
- Holland Rubber Co., New York, N. Y.
- Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.
- Liberty Mfg. Co., The, East Norwalk, Conn.
- Loyal Brass Co., Cleveland, O.
- Pennsylvania Rubber Co., The, Jeannette, Pa.
- Salisbury & Co., Inc., W. H., Chicago, Ill.
- Schacht Rubber Mfg. Co., The, Huntington, Ind.
- United—United Brass Mfg. Co., Cleveland, O.

## MECHANICAL RUBBER GOODS

for all purposes

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Branches: New York, Philadelphia, Washington, Duluth, Boston, Pittsburgh, Chicago, New Orleans, Houston, Denver, Seattle, San Francisco

- ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.
- Western Rubber Co., Goshen, Ind.
- Wilbow—The Williams-Bowman Rubber Co., Cicero, Ill.
- Woodward-Wanger Co., Philadelphia, Pa.

### RUBBERS, FLOOR SCRUBBING AND ICE MACHINERY.

Canfield Rubber Co., The, Bridgeport, Conn.

### RUBBERS, SEAT HINGE.

Canfield Rubber Co., The, Bridgeport, Conn.

### RUBBERS, WELL PACKER.

- ♦ Cincinnati Rubber Mfg. Co., The, Cincinnati, O.
- Diamond Rubber Co., The, Akron, O.
- Dominion Asbestos and Rubber Corp., New York, N. Y.
- Gutta Percha & Rubber Mfg. Co., New York.
- Hudson Mechanical Rubber Co., New York, N. Y.
- Kansas City Rubber & Belting Co., Kansas City, Mo.
- Larkin Packer Co., Bartlesville, O.
- Masseth—Masseth Packer & Machine Co., Butler, Pa.
- ♦ New York Belting & Packing Co., New York.
- Pierce-Peerless—Pierce Packer Co., Franklin, Pa.
- United States Rubber Co., Mechanical Goods Div., New York.

### RULES, BLACKSMITHS.

Lufkin Rule Co., Saginaw, Mich.  
Starrett Co., The L. S., Athol, Mass.

### RULES, BOARD AND LOG.

- Chapin-Stephens Co., The, Pine Meadow, Conn.
- Lufkin Rule Co., Saginaw, Mich.
- ♦ Stanley Rule & Level Co., New Britain, Conn.

### RULES, CALIPER.

Union Tool Co., Orange, Mass.

### RULES, COMBINATION.

- Johnson's Pat—E. P. Johnson Rule Mfg. Co., Chicago, Ill.
- Stephens Pat—The Chapin-Stephens Co., Pine Meadow, Conn.

### RULES, CUTTING, CRASING, SCORING AND PERFORATING.

- ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

### RULES, DESK.

- Forsyth Mfg. Co., Buffalo, N. Y.
- Lufkin Rule Co., Saginaw, Mich.
- Southington Hardware Co., Southington, Conn.
- ♦ Stanley Rule & Level Co., New Britain, Conn.
- Starrett Co., The L. S., Athol, Mass.

### RULES, DRAFTSMEN'S.

Starrett Co., The L. S., Athol, Mass.

### RULES, FOLDING.

- Bernz Co., Otto, Newark, N. J.
- ♦ Brown & Sharpe Mfg. Co., Providence, R. I.
- Flexifold, Nearsite, Pearce, Stephens Pat.—The Chapin-Stephens Co., Pine Meadow, Conn.
- Interlocking—Master Rule Mfg. Co., Inc., New York, N. Y.
- Lufkin Rule Co., Saginaw, Mich.
- Rustless, Zig-Zag—The Rustless Rule Co. (aluminum), Buffalo, N. Y.
- Starrett Co., The L. S., Athol, Mass.
- ♦ Victor—Stanley Rule & Level Co., New Britain, Conn.

### RULES, HOOK.

Starrett Co., The L. S., Athol, Mass.  
Union Tool Co., Orange, Mass.

### RULES, KEY SEAT.

- ♦ Brown & Sharpe Mfg. Co., Providence, R. I.
- Starrett Co., The L. S., Athol, Mass.
- Union Tool Co., Orange, Mass.

### RULES, METRIC.

Brown & Sharpe Mfg. Co., Providence, R. I.  
Starrett Co., The L. S., Athol, Mass.





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Bridgeport, Conn.



**RULES, PARALLEL, ROLLING.**  
Elliott Co., B. K., Pittsburg, Pa.

**RULES, SHRINK.**

Brown & Sharpe Mfg. Co., Providence, R. I.  
Lufkin Rule Co., Saginaw, Mich.  
Starrett Co., The L. S., Athol, Mass.

**RULES, SLIDE.**

Interlocking—Master Rule Mfg. Co., Inc., New York, N. Y.  
Keuffel & Esser Co., New York, N. Y.  
Masterslide—Irving Mfg. & Tool Co., New York, N. Y.  
Midget Richardson—Gilson Slide Rule Co., Niles, Mich.  
Starrett Co., The L. S., Athol, Mass.

**RULES, STEEL.**

Athol Machine Co., Athol, Mass.  
Billings & Spencer Co., Hartford, Conn.  
Brown & Sharpe Mfg. Co., Providence, R. I.  
Columbia Caliper Co., Marietta, Pa.  
Dill, T. C., Machine Co., Philadelphia, Pa.  
Goodsell-Pratt Co., Greenfield, Mass.  
Keuffel & Esser Co., New York, N. Y.  
Lufkin Rule Co., Saginaw, Mich.  
Peck, Stow & Wilcox Co., The, Southington, Conn.  
Rustless—Irving Mfg. & Tool Co., New York.  
Slocumb, J. T. Co., Providence, R. I.  
Starrett Co., The L. S., Athol, Mass.  
Stickermans Rule Co., Spokane, Wash.  
Union Tool Co., Orange, Mass.

**RUNNERS, CAULKED JOINT.**

American Brass Novelty Co., Grand Haven, Mich.  
American Saw & Tool Works, Chicago, Ill.  
Bernz Co., Otto, Newark, N. J.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
J-M—H. W. Johns-Manville Co., New York, N. Y.  
Johnson, Wm., Newark, N. J.  
Lord—The C. H. Yonts Co., Meadville, Pa.  
Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.  
Wilkins Imp—Geo. H. Wilkins Co., Chicago, Ill.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**RUST PREVENTIVE, REMOVERS, ETC.**

American—American Oil Corp., Jackson, Mich.  
Bancroft & Co., Philadelphia, Pa.  
Corol Anti-Rust—Simons Mfg. Co., Chicago, Ill.  
Fiske's—Fiske Brothers Refining Co., New York, N. Y.  
Houghton & Co., E. F., Philadelphia, Pa.  
Lukens Steel Co., Coatesville, Pa.  
Metaline—Metaline Chemical Co., Cleveland, Ohio.  
No-Ox-Id—Dearborn Chemical Co., Chicago, Ill.

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Oakite—Oakley Chemical Co., New York, N. Y.  
Parker Process—Parker Rust-Proof Co., of America, Detroit, Mich.  
Rohn—William M. Rohn, Cleveland, O.  
Rus-Co—Babbitt Steam Specialty Co., New Bedford, Mass.  
Rustsolvo—Rust Products Co. of America, The, Chicago, Ill.  
Tasgon—Polygon Products Co., Boston, Mass.  
Vatudrip—American Rust Proof Co., New York.

**SADDLES, BOILER.**

Worth Brothers Co., Philadelphia, Pa.

**SADDLES, MANHOLE.**

Glasgow—Glasgow Iron Co., Philadelphia, Pa.

**SADDLES, PIPE.**

American Foundry & Mfg. Co., St. Louis, Mo.  
C—Crane Co., Chicago, Ill.  
Dayton—The Dayton Pipe Coupling Co., Dayton, O.  
Dresser Mfg. Co., S. R., Bradford, Pa.  
Essex Foundry, Newark, N. J.  
Illinois Malleable Iron Co., Chicago, Ill.  
Kelly & Jones Co., The, Greensburg, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Midvale Steel & Ordnance Co., Philadelphia, Pa.  
Mueller Mfg. Co., H., Decatur, Ill.  
National—National Tube Co., Pittsburgh, Pa.  
Newbury Mfg. Co., Monroe, N. Y.  
Oil Well Supply Co., Pittsburgh, Pa.  
Pittsburgh Valve & Fittings Co., Barberton, O.  
Skinner—M. B. Skinner Co., Chicago, Ill.  
Walworth Mfg. Co., Boston, Mass.

**SAFETY CANS.**

(See "Cans, Safety, Non-Explosive.")

**SAFETY DOOR BOLTS, LOCKS AND FIXTURES.**

Bolles—Wm. B. Bolles, Milwaukee, Wis.

**SALAMANDERS.**

Aeroil—Aeroil Burner Co., Inc., Union Hill, N. J.  
Akron—Akron Barrow Co., Cleveland, O.  
Blehl Iron Works, Inc., The, Reading, Pa.  
Cleveland Foundry Co., Cleveland, O.  
Cleveland—P. D. Crane Co., Cleveland.  
Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Drouve Co., The G., Bridgeport, Conn.  
Hauck Mfg. Co., Brooklyn, N. Y.  
Indiana Foundry Co., Indiana, Pa.  
Littleford Bros., Cincinnati, O.  
Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
Northfield Iron Co., Northfield, Minn.  
Phillips, Doup & Co., Inc., Brooklyn, N. Y.  
Thor—Chausse Mfg. Co., Highland Park, Mich.  
Wilson Co., F. Cortez, Chicago, Ill.

**SALTPETRE (NITRATE OF POTASSIUM).**

Hercules Powder Co., Wilmington, Del.  
Du Pont, E. I., De Nemours Powder Co., Wilmington, Del.

**SALTS, SOLDERING (for all metals).**

Allen, L. B., Co., Inc., Chicago, Ill.  
Burnley—Burnley Battery & Mfg. Co., North East, Pa.  
Norwesco—The Northwestern Chemical Co., Marietta, O.

**SAND BLAST MACHINES AND EQUIPMENT.**

- American Foundry Equipment Co., New York, N. Y.  
 American, Wadsworth—Sand Mixing Machine Co., New York, N. Y.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Busch, J. C., Co., Milwaukee, Wis.  
 Carter Metals Cleaning Co., Philadelphia, Pa.  
 Coates Clipper Mfg. Co., Worcester, Mass.  
 Curtis & Co. Mfg. Co., St. Louis, Mo.  
 Cyclone Suction—W. F. Stodder, Syracuse, N. Y.  
 Drucklieb Injector—J. M. Betton, New York, N. Y.  
 ♦ Fairbanks, Morse & Co., Chicago, Ill.  
 Gray—Gray Machine Tool Co., Inc., Buffalo, N. Y.  
 Hoevel—Hoevel Mfg. Corp., New York.  
 Injector—J. M. Betton, New York, N. Y.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Lieberman Bros., New York, N. Y.  
 Mott Sand Blast Mfg. Co., Chicago, Ill.  
 New Haven Sand Blast Co., The, New Haven, Conn.  
 Niagara—Geo. M. Stowe, Jr., Buffalo, N. Y.  
 Obermayer Co., S., Cincinnati, O.  
 Pangborn—Pangborn Corp., Hagerstown, Md.  
 Paxson Co., J. W., Philadelphia, Pa.  
 Reichhelm & Co., Inc., E. P., New York, N. Y.  
 Sly—The W. W. Sly Mfg. Co., Cleveland, O.  
 Tilghman—Brooksbank Sand Blast Co., Philadelphia, Pa.

**SAND DRYERS OR DRYING STOVES.**

- Champion—Handlan-Buck Mfg. Co., St. Louis, Mo.  
 Hauck—Hauck Mfg. Co., Brooklyn, N. Y.  
 Northfield Iron Co., Northfield, Minn.  
 Pangborn—Pangborn Corp., Hagerstown, Md.  
 Punxsutawney Foundry & Machine Co., Punxsutawney, Pa.  
 Sutton—Indiana Foundry Co., Indiana, Pa.  
 Zelnicker—Walter A. Zelnicker Supply Co., St. Louis, Mo.

**SAND FILTERS.**

- American Water Softener Co., Philadelphia, Pa.

**SAW MILLS (AND SAW RIGS), PORTABLE**

- Adams, W. T., Machine Co., Corinth, Mass.  
 American—American Saw Mill Machinery Co., Hackettstown, N. J.  
 Arcadia Trailer Corporation, Newark, N. Y.  
 Bartley—Wm. Bartley & Sons, Bartley, N. J.  
 Castle—A. M. Castle Engineering Co., La Crosse, Wis.  
 C. H. & E. Manufacturing Co., Inc., Milwaukee, Wis.  
 Chase Turbine Mfg. Co., Orange, Mass.  
 De Loach Mill Mfg. Co., Bridgeport, Ala.  
 Economy—Northwestern Steel & Iron Works, Eau Claire, Wis.  
 Enterprise—Enterprise Co., The, Columbiana, O.  
 Farquhar—A. B. Farquhar Co., Ltd., York, Pa.  
 Faultless—Faultless Engine Co., Kansas City, Mo.  
 Fuller & Johnson Mfg. Co., Madison, Wis.  
 Hill-Curtis Co., Kalamazoo, Mich.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind. (band and circular).  
 Howell—R. R. Howell & Co., Minneapolis, Minn.  
 Lane Mfg. Co., Montpelier, Vt.  
 Monarch—American Scale Co., Kansas City, Mo.  
 Novo Engine Co., Lansing, Mich.  
 Olde—Seager Engine Works, Lansing, Mich.  
 Oshkosh Mfg. Co., Oshkosh, Wis.  
 Parks Ball Bearing Machine Co., Cincinnati, O.  
 Standard Saw Mill Machinery Co., Erie, Pa.  
 Star—Flint & Walling Mfg. Co., Kendallville, Ind.  
 United States Machine Co., Williamsport, Pa.  
 Witte—Witte Engine Works, Kansas City, Mo.

**SAWMILL SPECIALTIES.**

- American Saw Mill Mach'y Co., Hackettstown, N. J.  
 Cleveland Machinery & Supply Co., Cleveland, Tenn.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Patterson Co., Ltd., C. T., New Orleans, La. ("Zimmerman" wheel guards and track cleaner. "Coleman" conveyor cleats).

**SAWPOINTS AND SHANKS.**

- ♦ Ohlen-Bishop Co., The, Columbus, O.

**SAWS, BACK.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Crescent Co., Inc., The, Meriden, Conn.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Jennings, C. E., & Co., New York, N. Y.  
 Moore Bros., Jamestown, N. Y.  
 Napier Saw Works, Springfield, Mass.  
 Rockford Mitre Box Co., Rockford, Ill.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

**SAWS, BAND (MACHINES).**

(See "Machines, Band Saw.")

**SAWS, BAND, METAL CUTTING (BLADES).**

- Burro—Burroughs Tools Co., Inc., New York.  
 ♦ Disston & Sons Co., Henry, Philadelphia, Pa.  
 Lenox—American Saw & Mfg. Co., Springfield, Mass.

- Napier—Metal Saw & Machine Co., Inc., Springfield, Mass.  
 Nickel Steel—Swett, Frank W., & Son, Chicago, Ill.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Sinker-Davis Co., Indianapolis, Ind.  
 Thompson, Henry G., & Son Co., The, New Haven, Conn. (Also jig and magazine coils.)

**SAWS, BAND, NARROW.**

- Hoe—R. Hoe & Co., New York.

**SAWS, BAND, WOODCUTTING (BLADES).**

- Aero—Aero Works, Inc., New York, N. Y.  
 American—American Saw Mill Machinery Co., Hackettstown, N. J.  
 American Saw Filing Machine Co., Boston 14, Mass.  
 American Saw & Tool Works, Chicago, Ill.  
 Anderson, W. H., Tool & Supply Co., Detroit, Mich.  
 ♦ Atkins Silver Steel—E. C. Atkins Co., Indianapolis, Ind.  
 Bentel & Margedant Co., The, Hamilton, O.  
 Black Diamond—Black Diamond Saw & Machine Wks., Natick, Mass.  
 Burton, A. J., & Son, Quincy, Mass.  
 Clarkes Saw & Machine Works, Newark, N. J.  
 ♦ Crescent Machine Co., Leetonia, O.  
 ♦ Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Edge & Co., Frank, Grand Rapids. (Blades only.)  
 Eureka (metal sawing)—The Henry G. Thompson & Son Co., New Haven, Conn.  
 Fowle, John L., Woburn, Mass.  
 Griffiths, Albert, Saw Co., The, Boston, Mass.  
 ♦ Hoosier—Sinker-Davis Co., Indianapolis, Ind.  
 Huther—Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.  
 Lippert, E. T., Co., Pittsburgh, Pa.  
 ♦ Napier Saw Works, Inc., Springfield, Mass.  
 Nickel Steel—Swett, Frank W., & Son, Chicago, Ill.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 Quality Saw & Tool Works, Springfield, Mass.  
 Quinn, Wm. E., Company, Northampton, Mass.  
 Schuchardt & Schutte, New York, N. Y.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 S. & I. Co., The, Springfield, Mass.  
 Southern Saw Works, Atlanta, Ga.  
 Star Machinery Co., Seattle, Wash.  
 Thompson, Henry G., & Son Co., The, New Haven, Conn.  
 Toledo Saw Co., The, Toledo, O.  
 Towseley, John T., Mfg. Co., Cincinnati, O.  
 West Side—West Side Iron Works, Grand Rapids, Mich.  
 Western—Western Supply & Mfg. Co., Chicago, Ill.  
 Yates, P. B., Machine Co., Beloit, Wis.  
 Zeller & Nagel, Brooklyn, N. Y.

**SAWS, BUCK.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 ♦ Disston & Sons Co., Henry, Philadelphia, Pa.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Moore Bros., Jamestown, N. Y.  
 New Holland—New Holland Machine Co., New Holland, Pa.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 Stover Manufacturing & Engine Co., Freeport, Ill. (frames only).

**SAWS, CIRCULAR, CHISEL TOOTH.**

(See also "Saws, Circular, Woodcutting.")

- Hoe—R. Hoe & Co., New York.

**SAWS, CIRCULAR, COLD METAL CUTTING, HOT METAL CUTTING.**

- American Saw & Tool Works, Chicago, Ill.  
 ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Beakut—Hunter Saw & Machine Co., Pittsburgh, Pa.  
 Burr—John T. Burr & Sons, Brooklyn, N. Y.  
 Clarkes Saw & Machine Works, Newark, N. J.  
 ♦ Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Griffiths, Albert, Saw Co., The, Boston, Mass.  
 ♦ Hoe, R., & Co., New York.  
 Hunter Saw & Machine Co., Pittsburgh, Pa.  
 Lea Simplex—Earle Gear & Machine Co., Philadelphia, Pa.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Mackintosh Hemphill & Co., Pittsburgh, Pa.  
 Mesta—Mesta Machine Co., Pittsburgh, Pa.  
 Moltrup Steel Products Co., Beaver Falls, Pa.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 Quality Saw & Tool Works, Springfield, Mass.  
 Robson Mfg. Co., Galesburg, Ill.  
 Semhl—Huther Bros. Saw Mfg. Co., Rochester, N. Y.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 Simplex—Pittsburg Saw & Mfg. Co., Pittsburg, Pa.  
 ♦ Sinker-Davis Co., Indianapolis, Ind.  
 Taylor-Newbold—Tabor Mfg. Co., Philadelphia, Pa.  
 Tindel-Morris Co., Eddystone, Pa. (Inserted teeth.)  
 Thurco—Thurston Mfg. Co., Providence, R. I.

**SAWS, CIRCULAR, MITER.**

- ♦ Disston & Sons Co., Henry, Philadelphia, Pa.  
 ♦ Hoe, R., & Co., New York.  
 Huther—Huther Bros. Saw Mfg. Co., Rochester, N. Y.

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- American Saw & Tool Works, Chicago, Ill.
- Appleton Mfg. Co., Batavia, Ill.
- ◆ Atkins Silver Steel—E. C. Atkins Co., Indianapolis, Ind.
- Blue Ball Machine Works, Blue Ball, Pa.
- Buckeye Saw Mfg. Co., Columbus, O.
- Champion—A. E. White Machine Works, Eau Claire, Wis.
- Chattanooga Saw Works, The, Chattanooga, Tenn.
- Clarks Saw & Machine Works, Newark, N. J.
- Curtis—Curtis Saw Co., St. Louis, Mo.
- Curtis & Co. Mfg. Co., St. Louis, Mo.
- ◆ Disston & Sons, Inc., Henry, Philadelphia, Pa.
- Duplex—Huther Bros. Saw Mfg. Co., Rochester, N. Y.
- Eagle—Eagle Saw Works, Chattanooga, Tenn.
- Goodell-Pratt Co., Greenfield, Mass.
- Grammes, L. F. & Sons, Allentown, Pa.
- Griffiths, Albert, Saw Co., The, Boston, Mass.
- ◆ Hoe, R., & Co., New York.
- Hunter Saw & Machine Co., Pittsburgh, Pa.
- ◆ Knight Mfg. Co., The, Canton, O.
- Lippert, E. T., Co., Pittsburgh, Pa.
- Miner, J. H., Saw Mfg. Co., Meridian, Miss.
- Moltrup Steel Products Co., Beaver Falls, Pa.
- Moore Bros., Jamestown, N. Y.
- Newman Machine Co., Greensboro, N. C.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- Penfield Saw Works, The, Bristol, Conn.
- Quinn, Wm. E., Company, Northampton, Mass.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- Smith, Emerson & Co., Beaver Falls, Pa.
- Smith Mfg. Co., Fitchburg, Mass.
- Southern Saw Works, Atlanta, Ga.
- Toledo Saw Co., The, Toledo, O.
- United Saw Mfg. Co., Kane, Pa.
- Wallace, J. D., & Co., Chicago, Ill. (bench).
- Yates, P. B., Machine Co., Beloit, Wis.

### SAWS, COMPASS.

- Bishop, Geo. H., & Co., Lawrenceburg, Ind.
- Crescent—Crescent Co., Inc., The, Meriden, Conn.
- ◆ Disston & Sons Co., Henry, Philadelphia, Pa.
- Jennings, C. E., & Co., New York, N. Y.
- Moore Bros., Jamestown, N. Y.
- ◆ Ohlen-Bishop Co., The, Columbus, O.

### SAWS, CONCAVE.

- ◆ Atkins, E. C., & Co., Indianapolis, Ind.

- ◆ Disston & Sons Co., Henry, Philadelphia, Pa.
- Grammes, L. F. & Sons, Allentown, Pa.
- ◆ Hoe, R., & Co., New York.
- Huther—Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.
- Lippert, E. T., Saw Co., Pittsburgh, Pa.

### SAWS, COPING.

- ◆ Atkins—E. C. Atkins Co., Indianapolis, Ind.
- Burro—Burrough Tool Co., New York
- Caldwell—Caldwell Tool Co., Springfield, Mass.
- Crescent—Crescent Co., Inc., The, Meriden, Conn.
- Dikeman Mfg. Co., Norwalk, Conn.
- ◆ Disston & Sons Co., Henry, Philadelphia, Pa.
- Griffin—G. W. Griffin Co., Franklin, N. H.
- Jennings, C. E., & Co., New York, N. Y.
- Millers Falls Co., New York.
- Moore Bros., Jamestown, N. Y.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- Quality Saw & Tool Wks., Springfield, Mass.
- Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.

### SAWING OUTFITS, CORDWOOD.

- American Saw Mill Mach'y Co., Hackettstown, N. J.
- Appleton Mfg. Co., Batavia, Ill.



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- Aultman & Taylor Machinery Co., Mansfield, O.
- Badger Gas & Gasoline Engine Co., Kansas City, Mo.
- Baker Mfg. Co., Evansville, Wis.
- Buch's, A. Sons Co., Elizabethtown, Pa.
- Cleveland Machinery & Sup. Co., Cleveland, Tenn.
- Duplex Mfg. Co., Superior, Wis.
- Emerson-Brantingham Imp't Co., Rockford, Ill.
- Frick Co., Waynesboro, Pa.
- Knight Mfg. Co., Canton, O.
- Lindahl, Henry, Machine Co., Chicago, Ill.
- Moak Machine & Tool Co., Port Huron, Mich.
- Monitor—Baker Mfg. Co., Evansville, Wis.
- New Holland Machine Co., New Holland, Pa.
- Noxall—Cleveland Foundry & Machine Works, Cleveland, Tenn.
- Port Huron E. & T. Co., Port Huron, Mich.
- Russell & Co., The, Massillon, O.
- Shirk—P. E. Shirk, Blue Ball, Pa.
- United Engine Co., Lansing, Mich.

### SAWS, COTTON GIN AND LINTER.

Bradley—Bradley-Gin Saw Filer Co., Dallas, Texas.

### SAWS, CROSSCUT.

- ◆ Atkins Silver Steel—E. C. Atkins Co., Indianapolis, Ind.
- Bishop, Geo. H. & Co., Lawrenceburg, Ind.
- Butterworth & Lowe, Grand Rapids, Mich.
- Cleveland Machine Works, Cleveland, Tenn.
- Curtis & Co., Mfg. Co., St. Louis, Mo.
- ◆ Disston & Sons, Inc., Henry, Philadelphia, Pa.
- Lippert, E. T., Saw Co., Pittsburgh, Pa.
- Moore Bros., Jamestown, N. Y.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- West Side—West Side Iron Works, Grand Rapids, Mich.

### SAWS, CYLINDER.

- ◆ Atkins—E. C. Atkins Co., Indianapolis, Ind.
- ◆ Disston, Henry, & Sons, Inc., Philadelphia, Pa.

### SAWS, DRAG.

- American—American Saw Mill Mach'y Co., Hacketts-town, N. J.
- ◆ Atkins, E. C. & Co., Indianapolis, Ind.
- Curtis & Co., Mfg. Co., St. Louis, Mo.
- ◆ Disston & Sons, Inc., Henry, Philadelphia, Pa.
- Henderson Iron Works & Supply Co., Ltd., W. K. Shreveport, La.
- Hero—Appleton Mfg. Co., Batavia, Ill.
- Hill-Curtis Co., Kalamazoo, Mich.
- Ireland—Ireland Machine & Fdy. Co., Norwich, Conn.
- Lippert, E. T., Saw Co., Pittsburgh, Pa.
- Moore Bros., Jamestown, N. Y.
- Multnomah Iron Works, Portland, Ore.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- Ottawa—Ottawa Mfg. Co., Ottawa, Kan.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- Wheland—The Wheland Co., Chattanooga, Tenn.
- Whitman Agricultural Co., St. Louis, Mo.
- Worden Blue Streak—Leland Equipment Co., San Francisco, Calif.

### SAWS, ELECTRIC, PORTABLE & STATIONARY.

Ideal—Neil & Smith Electric Tool Co., The, Cincinnati.

### SAWS, FRICTION.

Morgan Engineering Co., Alliance, Ohio.

### SAWS, GANG.

- Anderson & Co., Ltd., Geo., Newark, N. J.
- ◆ Atkins, E. C. & Co., Indianapolis, Ind.
- Curtis & Co. Mfg. Co., St. Louis, Mo.
- ◆ Disston Sons Co., Henry, Philadelphia, Pa.
- Lippert, E. T., Saw Co., Pittsburgh, Pa.
- ◆ Ohlen—Ohlen-Bishop Co., The, Columbus, O.
- ◆ Simonds Mfg. Co., Fitchburg, Mass.
- United States Machine Co., Williamsport, Pa.

### SAWS, GROOVING.

- ◆ Atkins, E. C. & Co., Indianapolis, Ind.
- ◆ Disston Sons Co., Henry, Philadelphia, Pa.
- Griffiths, Albert, Saw Co., The, Boston, Mass.
- ◆ Hoe, R., & Co., New York.
- Lanison Cutter-Head Co., Chicago, Ill.

- Lippert, E. T., Saw Co., Pittsburgh, Pa.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- Sembi—Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

### SAWS, HACK (BLADES).

- Alston Saw & Steel Co., Inc., Folcroft, Pa. (ABC, Alston, Kit-Haxaw.)
- Apex—American Saw & Mfg. Co., Springfield, Mass.
- ◆ Atkins—E. C. Atkins Co., Indianapolis, Ind.
- Barnes—Barnes, W. O. Co., Detroit, Mich.
- Blanche Co., Inc., L. C., New York, N. Y.
- Bliss, E. C. Mfg. Co., Providence, R. I.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- Burro High Speed—Burroughs Tool Co., New York.
- Butterworth—Butterworth Supply Co., Philadelphia.
- Challenge Co., Batavia, Ill.
- Clemson Bros., Middletown, N. Y.
- Crescent—Crescent Co., Inc., The, Meriden, Conn.
- Culley—Simonds Mfg. Co., Fitchburg, Mass.
- ◆ Disston & Sons, Inc., Henry, Philadelphia, Pa.
- Dikeman Mfg. Co., Norwalk, Conn.
- Eureka Yankee—The Henry G. Thompson & Son Co., New Haven, Conn.
- Expert, Quality—Napier Saw Works, Inc., Middletown, N. Y.
- Flint—John H. Graham & Co., New York, N. Y.
- Fulton—Montgomery & Co., Inc., New York, N. Y.
- Gibraltar—H. Boker & Co., Inc., New York, N. Y.
- Gladium—The Gladium Co., Inc., New York, N. Y.
- Gleason—Montgomery & Co., New York, N. Y.
- Gold Label—H. B. Eaton & Co., Inc., Boston, Mass.
- Good—Good Mfg. Co., Inc., New York, N. Y.
- Goodell-Pratt Co., Greenfield, Mass.
- Grover—Grover File Co., Nashua, N. H.
- Griffin—G. W. Griffin Co., Franklin, N. H.
- Griffin—John H. Graham & Co., New York.
- Hub-Knoxall—Boston Saw & Tool Co., Boston, Mass.
- Hygrade—Standard Saw & Tool Mfg Co., Inc., Boston 27, Mass.
- Jennings & Co., C. E., New York, N. Y.
- Lenox—American Saw & Mfg. Co., Springfield, Mass.
- Liberty—Sterling Products Co., Inc., Chicago, Ill.
- Marvel—Merrill H. Hough, New York, N. Y.
- Mephisto—Ives, W. A. Mfg. Co., Wallingford, Conn.
- Mil Flex—The Henry G. Thompson & Son Co., New Haven, Conn.
- ◆ Milford—The Henry G. Thompson & Son Co., New Haven, Conn.
- Millers Falls Co., Millers Falls, Mass.
- Moore Bros., Jamestown, N. Y.
- ◆ Napier Saw Works, Springfield, Mass.
- National—Whitaker Mfg. Co., Chicago, Ill.
- Neal's—B. B. Neal Hardware Co., New York, N. Y.
- Nickel Steel—Frank W. Swett & Son, Chicago, Ill.
- Norman Warner Co., Inc., New York, N. Y.
- ◆ Ohlen-Bishop Co., The, Columbus, O.
- Peerless Machine Co., Racine, Wis.
- Quality Saw & Tool Works, Inc., The, Springfield, Mass.
- Racine H. S.—Racine Tool & Machine Co., Racine, Wis.
- Red Devil—Smith & Hemenway Co., Irvington, N. J.
- Robertson—Robertson Mfg. Co., Buffalo, N. Y.
- Sexauer, J. A. Mfg. Co., New York.
- S. & L. Co., The, Springfield, Mass.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- Simonds File Co., Fitchburg, Mass.
- Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.
- Spartan—Spartan Saw Works, Springfield, Mass.
- Star—Millers Falls Co., New York, N. Y.
- Starrett—The L. S. Starrett Co., Athol, Mass.
- ◆ Sterling—Diamond Saw & Stamping Works, Buffalo, N. Y.
- No. 30 Matchless—Bridgeport Hardware Mfg. Co., Bridgeport, Conn.
- ◆ Universal—The West Haven Mfg. Co., New Haven, Conn.
- ◆ Utility—The West Haven Mfg. Co., New Haven, Conn.
- ◆ Victor—Victor Saw Works, Inc., Middletown, N. Y.
- Visco—Burroughs Tool Co., New York, N. Y.
- Western—Western Supply & Mfg. Co., Chicago, Ill.
- Woodward-Wanger Co., Philadelphia, Pa.
- X. L.—The Henry G. Thompson & Son Co., New Haven, Conn.
- Yankee Toothed—B. B. Neal Hardware Co., Inc., New York, N. Y.

### SAWS, HACK, MACHINE

- ◆ Acme—West Haven Mfg. Co., New Haven, Conn.
- ◆ Atkins Kwick Kut—E. C. Atkins & Co., Indianapolis, Ind.
- Bernz Co., Otto, Newark, N. J.
- ◆ Challenge—Western Tool & Mfg. Co., Springfield, O.
- ◆ Champion—Western Tool & Mfg. Co., Springfield, O.
- Cleveland Block Co., Cleveland, O.
- Economy—W. Robertson Machine & Foundry Co., Buffalo, N. Y.
- Edlund—Edlund Machinery Co., Inc., Cortland, N. Y.
- Espen-Lucas Machine Works, Philadelphia, Pa.
- Eureka—The Henry G. Thompson & Son Co., New Haven, Conn.
- Frasse Steel Works, New York.
- Globe—The West Haven Mfg. Co., New Haven, Conn.

- Goodell-Pratt Co., Greenfield, Mass.  
 Griffin—G. W. Griffin Co., Franklin, N. H.  
 Higley—Vandyck-Churchill Co., New York.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Lenox—American Saw & Mfg. Co., Springfield, Mass.  
 Manley Mfg. Co., The, York, Pa.  
 ♦ Marvel—Armstrong-Blum Mfg. Co., Chicago, Ill.  
 Milford—The Henry G. Thompson & Son Co., New Haven, Conn.  
 ♦ M. S. W.—Victor Saw Works, Springfield, Mass. (portable).  
 Misener—Barnes & Irving, Inc., Syracuse, N. Y.  
 Monarch—Racine Metal Cutting Machine Co., Racine, Wis.  
 Mumford—Hanna Engineering Works, Chicago, Ill.  
 Myers Improved—Myers Machine Tool Corp., Columbia, Pa.  
 ♦ Napier Saw Works, Springfield, Mass.  
 O. I. O.—The Oliver Instrument Co., Adrian, Mich.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 Peerless—Peerless Machine Co., Racine, Wis.  
 Pond—Robinson Saw Co., Ltd., San Francisco, Calif.  
 Q & C—Hanna Engineering Wks., Chicago, Ill.  
 Quality Saw & Tool Works, Inc., The, Springfield, Mass.  
 Racine—H. S.—Racine Tool & Machine Co., Racine, Wis.  
 Red Devil—Smith & Hemenway Co., Irvington, N. J.  
 Simplex—Extensive Mfg. Co., The, New York, N. Y.  
 Star—Millers Falls Co., New York, N. Y.  
 Starrett, L. S., Co., The, Athol, Mass.  
 ♦ Sterling—Diamond Saw & Stamping Works, Buffalo, N. Y.  
 ♦ Victor—Victor Saw Works, Inc., Middletown, N. Y.  
 X. L.—The Henry G. Thompson & Son Co., New Haven, Conn.

**SAWS, HACK, ROTARY.**

Excelso—Excelso Specialty Works, Buffalo, N. Y.

**SAWS, HAND.**

- Aero—Aero Works, Inc., New York, N. Y.  
 American Saw & Tool Works, Chicago, Ill.  
 ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Crescent—Crescent Co., Inc., The, Meriden, Conn.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Ellis-Smith Mfg. Co., Inc., Buffalo, N. Y.  
 Expert, Quality—Napier Saw Works, Inc., Middletown, N. Y.  
 Jennings, C. E., & Co., New York, N. Y.  
 Keen Kutter—Simmons Hardware Co., St. Louis, Mo.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Moore Bros., Jamestown, N. Y.  
 Norwell-Shapleigh Hardware Co., St. Louis, Mo.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 Utilitas—Kasenit Company, New York.

**SAWS, ICE.**

- ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Curtis & Co. Mfg. Co., St. Louis, Mo.  
 Cushman—Cushman Motor Works, Lincoln, Neb.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Moore Bros., Jamestown, N. Y.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

**SAWS, JEWELERS' AND AUTO KIT.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Thompson, Henry G., & Son Co., The, New Haven, Conn.  
 Thurco—Thurston Mfg. Co., Providence, R. I.

**SAWS, JOINTING, CHAIN FEED.**

Jenkins Machine Co., Sheboygan, Wis.

**SAWS, METAL SLITTING.**

(See "Cutters, Milling.")

- American Twist Drill Co., Detroit, Mich.  
 ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Barber-Colman Company, Rockford, Ill.  
 "Cowles Cutters"—Cowles Tool Co., Cleveland, Ohio.  
 Detroit Reamer & Tool Co., The, Detroit, Mich.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 ♦ McCarthy Drill & Tool Co., New York, N. Y.  
 Morse Twist Drill & Mach. Co., New Bedford, Mass.  
 Thurco—Thurston Mfg. Co., Providence, R. I.

**SAWS, MILLING, METAL SLOTTING OR SCREW SLOTTING.**

(See also "Cutters, Milling.")

- Barber-Colman Co., Rockford, Ill.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Pratt & Whitney Co., Hartford, Conn.  
 Sembl—Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

- ♦ Standard Tool Co., Cleveland, O.  
 Starrett, L. S., Co., The, Athol, Mass.  
 Stevenson Gear Co., Indianapolis, Ind.  
 Thurco—Thurston Mfg. Co., Providence, R. I.

**SAWS, MITRE BOX.**

Ohlen—Ohlen Bishop Co., The, Columbus, O.  
 Rockford Mitre Box Co., Rockford, Ill.

**SAWS, NAIL CUTTING.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Crescent—Crescent Co., Inc., The, Meriden, Conn.

**SAWS, PLUMBERS'.**

- American Saw & Tool Works, Chicago, Ill.  
 ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Bernz Co., Otto, Newark, N. J.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Expert, Quality—Napier Saw Works, Inc., Middletown, N. Y.  
 Johnson, Wm., Newark, N. J.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 S. & I. Company, The, Springfield, Mass.  
 ♦ Sterling—Diamond Saw & Stamping Works, Buffalo.

**SAWS, PNEUMATIC.**

Ingersoll-Rand Co., New York, N. Y.

**SAWS, PRUNING.**

- Bishop, Geo. H., & Co., Lawrenceburg, Ind.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Moore Bros., Jamestown, N. Y.

**SAWS, RAIL.**

- Aldon—Aldon Co., The, Chicago, Ill.  
 ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Expert, Quality—Napier Saw Works, Inc., Middletown, N. Y.  
 Industrial Works, Bay City, Mich.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Schmidt—Manning, Maxwell & Moore, Inc., New York.

**SAWS, RIFT.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Eagle—Eagle Saw Works, Chattanooga, Tenn.  
 Hoe—R. Hoe & Co., New York.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

**SAWS, RIP, SELF FEED.**

- American—American Saw Mill Mach'y Co., Hackettstown, N. J.  
 ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Badger State Machine Works, Beloit, Wis.  
 Beach—Beach Mfg. Co., Montrose, Pa.  
 Hermance—Hermance Machine Co., Williamsport, Pa.  
 Hicks—The Woods Engineering Co., Alliance, O.  
 Holmes Machinery Co., E. & B., Buffalo, N. Y.  
 ♦ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.  
 Jenkins Machine Co., Sheboygan Falls, Wis.  
 Newman Machine Co., Greensboro, N. C.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 West Side—West Side Iron Works, Grand Rapids, Mich.  
 Woods Engineering Co., The, Alliance, O.

**SAWS, SCROLL.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Beach—Beach Mfg. Co., Montrose, Pa.  
 Bentel & Margendant, Hamilton, O.  
 Edge, Frank, & Co., Grand Rapids, Mich.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Lester, New Rogers, Star—Millers Falls Co., New York, N. Y.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Yates, P. B., Machine Co., Beloit, Wis.

**SAWS, SHAPER.**

Moller Machine Co., New Rochelle, N. Y.

**SAWS, SHINGLE.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Crown—American Saw Mill Machinery Co., Hackettstown, N. J.  
 ♦ Disston Sons Co., Henry, Philadelphia, Pa.  
 Eagle—Eagle Saw Works, Chattanooga, Tenn.  
 Griffiths, Albert Saw Co., The, Boston, Mass.  
 ♦ Hoe—R. Hoe & Co., New York.  
 Lippert, E. T., Saw Co., Pittsburgh, Pa.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 Southern Saw Works, Atlanta, Ga.

**SAWS, STEAM JUMP.**

Wheland—The Wheland Co., Chattanooga, Tenn.

**SAWS, STONE CUTTING.**

- ◆ Atkins—E. C. Atkins & Co., Indianapolis, Ind.
- ◆ Disston Sons Co., Henry, Philadelphia, Pa.
- ◆ Hoe—R. Hoe & Co., New York.
- ◆ Meyers, Willard F., New York, N. Y.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.

**SAWS, SWING, CUT-OFF.**

(See also "Machinery, Sawmill.")

- American—American Saw Mill Mach'y Co., Hacketts-town, N. J.
- ◆ Atkins, E. C., & Co., Indianapolis, Ind.
- Badger State—Badger State Machine Works, Beloit, Wis.
- Beach—Beach Mfg. Co., Montrose, Pa.
- Beloit—Hendley & Whittemore Co., Beloit, Wis.
- Bentel & Margedant, Hamilton, O.
- Burke Machine Tool Co., Conneaut, O.
- ◆ Crescent—Crescent Machine Co., Leestonia, O.
- Dodds, Alexander Co., Grand Rapids, Mich.
- General Supply & Machine Co., Meridian, Miss.
- Grammes, L. F., & Sons, Allentown, Pa.
- Hill-Curtis Co., Kalamazoo, Mich.
- ◆ Hoe—R. Hoe & Co., New York.
- Holmes Machinery Co., E. & B., Buffalo, N. Y.
- ◆ Hoosier—The Sinker-Davis Co., Indianapolis, Ind.
- Jenkins Machine Co., Sheboygan, Wis.
- Kline, Lewis T., Alpena, Mich.
- Newman Machine Co., Greensboro, N. C.
- Nutter & Barnes Co., Boston, Mass.
- O. & W.—Olney & Warrin, New York, N. Y.
- Ober—Ober Mfg. Co., Chagrin Falls, Ohio.
- Oliver—Oliver Machinery Co., Grand Rapids, Mich.
- Porter Mach'y Co., C. O., Grand Rapids, Mich.
- ◆ Prybil Machine Co., The, New York, N. Y.
- Racine Tool & Machine Co., Racine, Wis.
- Raleigh Iron Works Co., Raleigh, N. C.
- Reliance—Kaetker Saw Machine Co. (motor driven)
- Silver—The Silver Mfg. Co., Salem, O.
- ◆ Sinker-Davis Co., The, Indianapolis, Ind.
- Standard Saw Mill Machinery Co., Erie, Pa.
- Towsley, John T., Mfg. Co., Cincinnati, O.
- United States Machine Co., Williamsport, Pa.
- Wallace—J. D. Wallace & Co., Chicago, Ill.
- Wheland—The Wheland Co., Chattanooga, Tenn.
- Woods Machine Co., S. A., Boston, Mass.
- Yates, P. B., Machine Co., Beloit, Wis.

**SAWS, THIN WOOD.**

Seibert &amp; Co., Louis L., Cincinnati, O.

**SAWS, TUBING, FOR HAND FRAME USE.**

- ◆ Expert, Quality—Napier Saw Works, Inc., Middle-town, N. Y.
- Pittsburg Saw & Mfg. Co., Pittsburg, Pa.
- "T T"—Henry G. Thompson & Son Co., New Haven, Conn.

**SAWS, VARIETY.**

Beach—Beach Mfg. Co., Montrose, Pa.  
West Side—West Side Iron Works, Grand Rapids, Mich.

**SAWS, VENEER.**

Seibert &amp; Co., Louis L., Cincinnati, O.

**SCAFFOLDING, STEEL, ADJUSTABLE.**

- Folding Scaffold Bracket Co., The, Detroit, Mich.
- Neville Mfg. Co., Kewanee, Ill.
- Safety First—John Faragher, Madison, Wis.
- Trouble-Saver—The Steel Scaffolding Co., Evansville, Ind.
- ◆ Western Tool & Mfg. Co., Springfield, O.

**SCAFFOLDING, WOOD, ADJUSTABLE.**

Consolidated Pump Co., Toledo, Ohio.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill. (suspended).  
Niagara, Prince—United States Ladder Co., Chicago, Ill.

**SCALES.**

- American Kron—American Kron Scale Co., New York.
- American—American Scale Co., Kansas City, Mo.
- Ball Bearing—Howe Scale Co., Rutland, Vt.
- Bennington Scale Co., Bennington, Vt.
- Boss D—Dempster Mfg. & Sup. Co., Des Moines, Ia.
- Buffalo Scale Co., Inc., Buffalo, N. Y.
- ◆ Brown & Sharpe Mfg. Co., Providence, R. I.
- ◆ Crescent—Standard Scale & Supply Co., Pittsburgh, Pa.
- ◆ Fairbanks, Morse & Co., Chicago, Ill.
- Fairbanks—The Fairbanks Co., New York, N. Y.
- Fairbanks & Co., E. & T., St. Johnsbury, Vt.
- Gaston Scale Co., Beloit, Wis.
- Grand Rapids Scale Co., Grand Rapids, Mich.
- Hoepner—Hoepner Automatic Scale Co., Chicago, Ill.
- Indiana Scale & Truck Co., Toledo, O.
- Jones of Binghamton, Binghamton, N. Y.
- Knowles Scale Works, Lowell, Mass.

Knudson Scale Works, Troy, N. Y.  
Leinert—John Simmons Co., New York, N. Y. (Automatic gravity.)  
Lowell Scale Co., Lowell, Mass.  
Lundberg Scale Works, Troy, N. Y.  
Merrick Weightometer—Richardson Scales Co., Passaic, N. J.  
Meyer Scale & Hardware Co., Newark, N. J.  
Moline Scale Co., Moline, Ill.  
Musgrave Co., Des Moines, Ia.  
National Packaging Machinery Co., Boston, Mass.  
National Scale Co., Chicopee Falls, Mass. (Automatic.)  
O'Brien, James H., Scale & Supply Co., New York.  
Osgood Scale Co., Binghamton, N. Y.  
Palmyra Scale & Mach. Works, Palmyra, N. Y.  
Richardson Scales Co., Passaic, N. J.  
Southwalk Scale Co., Philadelphia, Pa.  
Standard—Standard Scale & Supply Co., Pittsburgh.  
Stearns Motor Mfg. Co., Ludington, Mich.  
Stimson Standard Scale Co., Detroit, Mich.  
Toledo Scale Co., Toledo, O.  
Troy Scale Co., Troy, N. Y.  
Weeks Scale Works, Buffalo, N. Y.

**SCALES, BATHROOM.**

Fairbanks, E. & T., & Co., St. Johnsbury, Vt.  
Mott Iron Works, The J. L., Trenton, N. J.  
Silver & Co., Brooklyn, N. Y.  
Standard Scale & Supply Co., Pittsburgh, Pa.

**SCALES, COAL, BOILER ROOM.**

Fairbanks, Morse & Co., Chicago, Ill.  
Merrick Weightometer—Richardson Scale Co., New York, N. Y.

**SCALES, FLUID PRESSURE FOR TESTING.**

Crosby Steam Gage &amp; Valve Co., Boston, Mass.

**SCALES, HYDROSTATIC.**

Schaeffer &amp; Budenberg Co., Brooklyn, N. Y.

**SCALES, RAILROAD TRACK, WAGON, MOTOR TRUCK, HOPPER AND MINER, DEPOT, DORMANT AND PORTABLE, COUNTER AND POSTAL, MONORAIL AND CRANE.**

Buffalo—Buffalo Scale Co., Inc., Buffalo, N. Y.  
Strait Scale Co., Kansas City, Mo.

**SCARIFIERS.**

Reliance—Universal Road Machinery Co., Kingston, N. Y.

**SCRAP—ALUMINUM, BRASS, COPPER, IRON, LEAD, PAPER, RUBBER.**

- Atlantic Iron & Metal Co., Cleveland, O.
- ◆ By-Products Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

**SCRAPERS, BEARING.**

- Anderson—Anderson Bros. Mfg. Co., Rockford, Ill.
- ◆ Buftum Tool Co., Louisiana, Mo.
- Challenge—Harrold Tool & Forge Co., Columbiana, O.
- Hayes—Hayes File Co., Detroit, Mich.
- H. J. H.—Harrold Tool & Forge Co., Columbiana, O.
- Marcy Tool Works, Inc., Putnam, Conn.
- Mound—Mound Tool Co., St. Louis, Mo.
- Pilleys—Pilleys Packing & Flue Brush Mfg. Co., St. Louis, Mo.
- Vlchek Tool Co., The, Cleveland, O.

**SCRAPERS AND BALERS, BROOM CORN.**

Galesburg, Acme—Shaw, Welsh &amp; Co., Galesburg, Ill.

**SCRAPERS, BOX.**

- Bradley's Sons, G. W., Westport, Conn.
- Dandy—Bridgeport Hardware Mfg. Co., Bridgeport, Conn.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Hargrave—The Cincinnati Tool Co., Cincinnati, O.
- Jennings, C. F., & Co., New York, N. Y.
- Johnson, Wm., Newark, N. J.
- Marcy—Marcy Tool Works, Putnam, Conn.
- Pack, Stow & Wilcox Co., Southington, Conn.
- Perfection—Bridgeport Hardware Mfg. Co., Bridgeport, Conn.
- ◆ Simonds—Simonds Mfg. Co., Fitchburg, Mass.
- S. & I. Co., The, Springfield, Mass.
- Stanley Rule & Level Co., New Britain, Conn.
- Vaughan & Bushnell Mfg. Co., Chicago, Ill.
- White Co., The L. & I., Buffalo, N. Y.

**SCRAPERS, CABINET MAKERS.**

- Buckeye Vise Co., Cleveland, O.
- Crescent—Crescent Co., Inc., The, Meriden, Conn.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Dikeman Mfg. Co., The, Norwalk, Conn.
- ◆ Disston & Sons Co., Henry, Philadelphia, Pa.
- Jennings, C. F., & Co., New York, N. Y.
- Johnson, Wm., Newark, N. J.



Kraeuter & Co., Inc., Newark, N. J.  
 Pecks—West Haven Mfg. Co., West Haven, Conn.  
 Starrett Co., The L. S., Athol, Mass.  
 S. & I. Co., The, Springfield, Mass.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Weber—Weber Mfg. Co., West Allis, Wis.

**SCRAPERS, CARBON.**

H. J. H.—Harrold Tool & Forge Co., Columbiana, O.  
 Marcy Tool Works, Inc., Putnam, Conn.  
 Morgan Mfg. Co., Inc., Keene, N. H.

**SCRAPERS, FLUE.**

(See "Cleaners, Boiler Flue.")

C. E. C.—Combustion Engineering Corp., New York.  
 ♦ Gem Mfg. Co., Pittsburgh, Pa.  
 Walsh & Weidner Boiler Co., The, Chattanooga, Tenn.

**SCRAPERS, PIPE.**

Mound—Mound Tool Co., St. Louis, Mo.

**SCRAPERS, PLUMBERS'.**

(See "Hooks, Shave.")

**SCRAPERS, ROAD AND DRAG.**

American—The American Steel Scraper Co., Sidney, Ohio.  
 Asheboro Wheelbarrow Co., Asheboro, N. C.  
 Baker-Mancy—Baker Mfg. Co., Springfield, Ill.  
 Beaumont, R. H., Co., Philadelphia, Pa. (coal storage).  
 Bull Frog—Toledo Wheelbarrow Co., Toledo, O.  
 Doan—Sidney Steel Scraper Works, Sidney, O.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Fresno and Stockton—The Holt Mfg. Co., Stockton, Cal.  
 Georgian—The Fairbanks Co., New York, N. Y.  
 Haslup, Sidney—Sidney Steel Scraper Works, Sidney, Ohio.  
 Kilbourne & Jacobs Mfg. Co., Columbus, O.  
 Lansing Co., Lansing, Mich.  
 Lehr-Doan—Lenmar Mfg. Co., Saginaw, Mich.  
 Sauerman Bros., Chicago, Ill.  
 Southern—Chattanooga Wheelbarrow Co., Chattanooga, Tenn.  
 Stockland Road Machinery Co., Minneapolis, Minn.  
 Syracuse Chilled Plow Co., Syracuse, N. Y.  
 Western—Western Wheeled Scraper Co., Aurora, Ill.

**SCRAPERS, ROOFING.**

National Tool Co., Brooklyn, N. Y.

**SCREENS, REVOLVING AND SHAKING.**

Beckley Perforating Co., Garwood, N. J.  
 Buchanan—C. G. Buchanan Co., Inc., New York, N. Y.  
 Caldwell, H. W., & Son Co., Chicago, Ill.  
 Converse—F. S. Converse Co., Inc., Johnson City, N. Y.  
 Dull, Raymond W., Co., Chicago, Ill.  
 Erdle Perforating Co., Rochester, N. Y.  
 ♦ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Lewistown Foundry & Machine Co., Lewistown, Pa.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 Newaygo—Sturtevant Mill Co., Boston, Mass.  
 Sackett, H. B., Screen & Chute Co., Chicago, Ill.  
 Seaverns, James B., Chicago, Ill.  
 Specialty Engineering Co., Philadelphia, Pa.  
 Stedman's Foundry & Machine Works, Aurora, Ind.  
 Telsmith—Smith Engineering Works, Milwaukee, Wis.  
 Wolf Co., The, Chambersburg, Pa.

**SCREENS, SEWAGE.**

Link-Belt Company, Chicago and Philadelphia, Pa.  
 P. F. T.—Pacific Flush Tank Co., Chicago, Ill.

**SCREENS, TRAVELING, WATER.**

♦ Chain Belt Co., Milwaukee, Wis.  
 Link-Belt Company, Chicago and Philadelphia, Pa.

**SCREENS, VENT.**

J. R. S.—Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.

**SCREENS, WATER.**

American—The American Well Works, Aurora, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Detroit—Central Station Steam Co., Detroit, Mich.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Johnson—Chicago Well Supply Co., Chicago, Ill.  
 Layne & Bowler Co., Memphis, Tenn. (water and oil well).  
 Link-Belt Company, Chicago and Philadelphia, Pa.

**SCREENS, WIRE, FOR COAL, SAND, ETC.**

Antigo—Mayer Bros., Antigo, Wis.

Batavia Engineering Works, Batavia, Ill.  
 Beyer Machine Co., Jackson, Mich.  
 Buffalo Wire Works, Buffalo, N. Y.  
 Cleveland Wire Cloth Mfg. Co., Cleveland, O.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Converse—F. S. Converse Co., Inc., Johnson City, N. Y.  
 Cook, A. D., Lawrenceburg, Ind.  
 Cross Engineering Co., Carbondale, Pa.  
 Griscom-Spencer Co., The, New York, N. Y.  
 Howard & Morse, New York, N. Y.  
 ♦ Jeffrey Mfg. Co., Columbus, O.  
 Jordan & Steel Mfg. Co., Charlotte, Mich.  
 Link-Belt Company, Chicago and Philadelphia.  
 Littleford Bros., Cincinnati, O.  
 Michigan Wire Cloth Co., Detroit, Mich.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 Michigan Wire Cloth Co., Detroit, Mich.  
 Morgan—Beckley Perforating Co., Garwood, N. J.  
 Morrow Mfg. Co., Wellston, Ohio.  
 Northfield Iron Co., Northfield, Minn.  
 Nortmann-Duffke Co., Milwaukee, Wis.  
 Oliver Mfg. Co., Wm. J., Knoxville, Tenn.  
 Parrish Flexible Arm—Wilmot Engineering Co., Hazelton, Pa.  
 Pratt Engineering & Machine Co., Atlanta, Ga.  
 Reliance—Universal Road Machinery Co., Kingston, N. Y.  
 Robins Conveying Belt Co., New York.  
 Sackett-Chicago—Sackett Screen & Chute Co., Chicago.  
 ♦ Standard—Jeffrey Mfg. Co., Columbus, O.  
 Standard Sand & Machine Co., Cleveland, O.  
 Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Tyler—W. S. Tyler Co., Cleveland, O. (woven).  
 Union Engineering Co., Cleveland, Ohio.  
 Usona Mfg. Co., St. Louis, Mo.  
 Webb City & Cartersville Foundry & Machine Works, Webb City, Mo.  
 ♦ Webster Mfg. Co., The, Chicago, Ill.  
 Wickwire Spencer Steel Corp., New York, N. Y.

**SCREWDRIVERS.**

♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
 Arcade Mfg. Co., Freeport, Ill.  
 Bernz, Otto, Newark, N. J.  
 Billings & Spencer Co., The, Hartford, Conn.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Buffum Tool Co., Louisiana, Mo.  
 Bullock Mfg. Co., Springfield, Mass.  
 Cassidy-Fairbanks Mfg. Co., The, Chicago, Ill.  
 Champion—Union Hardware Co., Torrington, Conn.  
 Clark—Connecticut Valley Mfg. Co., Centerbrook, Conn.  
 Crescent—Crescent Co., Inc., The, Meriden, Conn.  
 Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.  
 C-S Co.—Chapin-Stephens Co., Pine Meadow, Conn.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Eclipse—Buffum Tool Co., Louisiana, Mo.  
 Elmore—Chapin-Stephens Co., Pine Meadow, Conn.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Hamr-Handl—Crescent Tool Co., Jamestown, N. J.  
 Harding Mfg. Co., Mansfield, Mass. (Trade names—Blue Line, Gray Line, Junior, Everyman's, Midget).  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Harold Tool & Forge Co., Columbiana, O.  
 ♦ Harwood Defiance—Stanley Rule & Level Co., New Britain, Conn.  
 Hawks—Hugo Mfg. Co., Duluth, Minn.  
 Herbrand Co., The, Fremont, O.  
 Hercules Knife Handle, Reliance, Challenge, Matchless, Vulcan—Bridgeport Hardware Mfg. Co., Bridgeport, Conn.  
 Ideal—Neil & Smith Electric Tool Co., The, Cincinnati, O.  
 Irvington Mfg. Co., Irvington, N. J.  
 Jennings, C. F., & Co., New York, N. Y.  
 Johnson, Wm., Newark, N. J.  
 Lewis (2-point)—Lewis Tool Mfg. Co., Boston, Mass.  
 Little Wonder, Tom Thumb—Bridgeport Hardware Mfg. Corp., Bridgeport, Conn.  
 Lock Ferrule—Dicke Tool Co., The, Downer's Grove, Ill.  
 Marcy Tool Works, Inc., Putnam, Conn.  
 Mayhew Steel products, Inc., New York, N. Y.  
 Midget—West Haven Mfg. Co., New Haven, Conn.  
 Millers Falls Co., New York, N. Y.  
 Monarch—Buffum Tool Co., Louisiana, Mo.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 New Century—Braunsdorf-Mueller Co., Elizabeth, N. J.  
 No-Bust—Dean & Robinson, New York, N. Y.  
 North Bros. Mfg. Co., Philadelphia, Pa.  
 ♦ Peck, Stow & Wilcox Co., The, New York, N. Y.  
 Perfect Handle—The H. D. Smith & Co., Plantsville, Conn.  
 Philadelphia—Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Pioneer—The Southington Mfg. Co., Southington, Conn.  
 Red Devil—Smith & Hemenway Co., New York, N. Y.  
 Rubber Covered—H. D. Smith & Co., Plantsville, Conn.  
 Russell & Erwin Co., New Britain, Conn.

**S. & I. Co., The, Springfield, Mass.**  
**Samson—Sawyer Tool Mfg. Co., Fitchburg, Mass.**  
**Sargent—Sargent & Co., New Haven, Conn.**  
**S. M. Co.—The Southington Mfg. Co., Southington, Conn.**  
**Starrett, L. S., Co., Athol, Mass.**  
**Stiles & Co., H. A., Boston, Mass.**  
**Swan Co., The James, Seymour, Conn.**  
**The Wire Goods Co., Worcester, Mass.**  
**Tower & Lyon Co., New York, N. Y.**  
**Tuck Mfg. Co., Brockton, Mass.**  
**Turner & Deegan, Bristol, Conn. (Trade names—Handy, Rosedale, Bristol, Victor.)**  
**Uncle Sam—Vaughn & Bushnell Mfg. Co., Chicago, Ill.**  
**Union Tool Co., Orange, Mass.**  
**Vanderbeek Tool Wks., Hartford, Conn.**  
**Vichek Tool Co., The, Cleveland, O.**  
**Woodward-Wanger Co., Philadelphia, Pa.**  
**Yankee—North Bros. Mfg. Co., Philadelphia, Pa.**

#### SCREWDRIVERS, ADJUSTABLE.

Perfect Handle—The H. D. Smith Co., Plantsville, Conn.

#### SCREWDRIVERS, ELECTRICIANS'.

Blue Line—Harding Mfg. Co., Mansfield, Mass.  
 Coates Clipper Mfg. Co., Worcester, Mass.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Perfect Handle—H. D. Smith Co., Plantsville, Conn.  
**Starrett Co., The L. S., Athol, Mass.**  
 S. & I. Company, The, Springfield, Mass.

#### SCREWDRIVERS, MACHINISTS.

Perfect Handle—H. D. Smith Co., Plantsville, Conn.

#### SCREWDRIVERS, MAGAZINE AND POCKET.

Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### SCREWDRIVERS, MOTOR DRIVEN.

Adbro—Adbro Manufacturing Co., Pittsburg, Pa.  
 McKay, Geo. C., Cleveland, Ohio.  
 Stow Mfg. Co., Binghamton, N. Y.  
 Wodack—Wodack Electric Tool Corp., Chicago, Ill.

#### SCREWDRIVERS, OFFSET.

National Tool Co., Brooklyn, N. Y.  
 Perfect Handle—H. D. Smith Co., Plantsville, Conn.  
 S. & I. Company, The, Springfield, Mass.  
 Vichek Tool Co., The, Cleveland, O.

#### SCREWDRIVERS, RATCHET.

Goodell-Pratt Co., Greenfield, Mass.  
 Hargrave Pistol Grip—Cincinnati Tool Co., Cincinnati, O.  
 Millers Falls Co., New York, N. Y.  
 Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### SCREWDRIVERS, SPIRAL.

Belvidere—Belvidere Screw & Machine Co., Belvidere, Ill.  
 Millers Falls Co., New York, N. Y.  
 Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### SCREWDRIVERS, "T" HANDLE.

Hammer Handle—Crescent Tool Co., Jamestown, N. Y.

#### SCREWHOLES.

Stine Screw Holes Co., The, Waterbury, Conn.

#### SCREW MACHINE PRODUCTS.

American Die & Tool Co., Reading, Pa.  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Atlas Brass Foundry Co., The, Columbus, O.  
 Automatic Products Corp., Long Island City, N. Y.  
 Babson-Dow Mfg. Co., Roxbury, Mass.  
 Baltimore Machine Products Co., Baltimore, Md.  
 Bard Mfg. Co., Rogersford, Pa.  
 Barnes, Wallace Co., Bristol, Conn.  
 Belco—The Bell Company, Buffalo, N. Y.  
 Blake & Johnson Co., Waterbury, Conn.  
 Boston Machine Screw Co., Cambridge, Mass.  
 Bridgeport Metal Goods Mfg. Co., Bridgeport, Conn.  
 Chapman Company, Berlin, Wis.  
 Chicago Automatic Machine Co., Chicago, Ill.  
 Chicago Nut Co., Chicago, Ill.  
 Chicago Screw Co., Chicago, Ill.  
 Cincinnati Automatic Machine Co., Cincinnati, O.  
 Cincinnati Screw Co., Twightree, O.  
 Clark Cadle Harmon Corp., Rochester, N. Y.  
 Cleveland National Machine Co., Cleveland, Ohio.  
 Cleveland Wrought Products Co., Cleveland, O.  
 Commonwealth Brass Corp., Detroit, Mich.  
 Conley, F. Co., The, Detroit, Mich.  
 Cornwall & Patterson Mfg. Co., Bridgeport, Conn.  
 Critchley Machine Screw Co., Worcester, Mass.  
 Danielson, Co., Inc., J. P., Jamestown, N. Y.  
 Davenport Machine Tool Co., New Bedford, Mass.  
 Davis & Hemphill, Elkridge, Md.

♦ **Detroit Screw Works, Detroit, Mich.**  
 Doud Lighting Co., Chicago, Ill.  
 Eastern Machine Screw Corp., New Haven, Conn.  
 Fallon Machinery Company, Lynn, Mass.  
 Fischer Special Mfg. Co., Cincinnati, O.  
 Flannery, P. J., Co., New Britain, Conn.  
 Fostoria Screw Co., Fostoria, O.  
 Fox Chase Engineering Co., Inc., Philadelphia, Pa.  
 Garfield Machine Works, Garfield, N. J.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Grant & Wood Mfg. Co., Detroit, Mich.  
 H. M. S.—Hartford Machine Screw Co., Hartford, Conn.  
 Hill, G. Q. Co., Boston, Mass.  
 Hough Mfg. Co., The Chas. N., Franklin, Pa.  
 Kotten Machine Co., Jersey City, N. J.  
 Link-Belt Company, Chicago, Ill.  
 Livermore, Homer F., Inc., Boston, Mass.  
 Lubenow Mfg. Co., Milwaukee, Wis.  
 Mattatuck Mfg. Co., Waterbury, Conn.  
 Matthews, H. A., Mfg. Co., Seymour, Conn.  
 Mellor Mfg. Co., Springfield, Mass.  
 Mergenthaler Co., The, Baltimore, Md.  
 Miles, Franklin S., Co., Philadelphia, Pa.  
 Morgan Mfg. Co., Inc., Keene, N. H.  
 Niagara Brass Corp., Lockport, N. Y.  
 ♦ **National Acme Co., Cleveland, O.**  
 National Cycle & Mfg. Co., Bay City, Mich.  
 Nelson Tool Co., Inc., New York, N. Y.  
 New Britain—New Britain Machine Co., New Britain, Conn.

New Haven Screw Co., New Haven, Conn.  
 Newton Mfg. Co., The, Plainville, Conn.  
 ♦ **Ottemiller, Wm. H., Co., York, Pa.**  
 Parker White Metal & Machine Co., Erie, Pa.  
 Perry-Fay Co., The, Elyria, O.  
 Phillips, R. B., Mfg. Co., Worcester, Mass.  
 Progressive Mfg. Co., Torrington, Conn.  
 Racine Electric Co., Racine, Wis.  
 Reed & Prince Mfg. Co., Worcester, Mass.  
 Reidy Machine Screw Co., New Haven, Conn.  
 Reynolds & Co., New Haven, Conn.  
 St. Louis Screw Co., St. Louis, Mo.  
 Schaefer Mfg. Co., Berlin, Wis.  
 Screw Machinery Products Corp., Providence, R. I.  
 Spencer's, I. S., Sons, Guilford, Conn.  
 Standard Brass & Iron Works, Milwaukee, Wis.  
 ♦ **Standard Pressed Steel Co., Philadelphia, Pa.**  
 Stevens Mfg. Co., Dayton, O.  
 Stevens & Co., New York, N. Y.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Stowe, Geo. M., Jr., Buffalo, N. Y.  
 Victor Tool & Mfg. Co., Chicago, Ill.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Western Automatic Machine Screw Co., Elyria, O.  
 Western Screw Products Co., St. Louis, Mo.  
 Whitman Metal Goods Co., Whitman, Mass.  
 Wood, J. R. Supply Co., Cincinnati, Ohio.

#### SCREW THREAD COMPARATOR.

Jones & Lamson Machine Co., Springfield, Vt.

#### SCREWS, BENCH AND HAND.

Adjustable Clamp Co., Chicago, Ill.  
 Aldrich—William K. Aldrich Co., Lowell, Mass.  
 Chapin-Stephens Co., Pine Meadow, Conn.  
 Estes, E. B., & Sons, New York, N. Y.  
 Freeport Truck & Clamp Co., Freeport, Mich.  
 Grand Rapids School Equipment Co., Grand Rapids, Mich.  
 Handy—Handy Mfg. Co., Chicago, Ill.  
 Norfolk Mfg. Co., The, Norfolk, Conn.  
 Reading Hardware Co., Reading, Pa.  
 ♦ **Rock Island Mfg. Co., Rock Island, Ill.**  
 Sandusky Tool Co., Sandusky, O.  
 Sargent—Sargent & Co., New Haven, Conn.  
 Welch, T. F., & Co., Boston, Mass.

#### SCREW BORE, FOR PORTABLE CONCRETE CONSTRUCTION.

Craig—David Craig, Boston, Mass.  
 Richmond—Richmond Screw Anchor Co., New York, N. Y.

#### SCREWS, BRASS.

American Brass & Copper Co., The, New York, N. Y.  
 American Pin Co., Waterbury, Conn.  
 ♦ **American Screw Co., Providence, R. I.**  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Atlas Bolt & Screw Co., Cleveland, O.  
 Belco—The Bell Company, Buffalo, N. Y.  
 Benedict—James Graham & Co., New Haven, Conn.  
 Blake & Johnson Co., The, Waterbury, Conn.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Equipoise Rivet Co., The, Waterbury, Conn.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 ♦ **National Screw & Tack Co., Cleveland, O.**  
 New England Screw Co., Boston, Mass.  
 ♦ **Parker, Chas., Co., The, Meriden, Conn.**  
 Pheoli Mfg. Co., Chicago, Ill.  
 Richards, Benjamin, & Co., The, Winsted, Conn.  
 St. Louis Screw Co., St. Louis, Mo.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.

Topping Bros., New York, N. Y.  
Waltham Appliance Co., Waltham, Mass.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**SCREWS, CAP, MACHINE AND SET.**

- Allen Socket Head Cap Screw—Allen Mfg. Co., Inc., Hartford, Conn.  
♦ American Screw Co., Providence, R. I.  
Ansonia Mfg. Co., Ansonia, Conn.  
Atlas Bolt & Screw Co., Cleveland, O.  
Automatic Products Corp., Long Island City, N. Y.  
Belco—The Bell Company, Buffalo, N. Y.  
Blake & Johnson Co., Waterbury, Conn.  
Bristol's—Bristol Co., The, Waterbury, Conn.  
Buffalo Bolt Co., Buffalo, N. Y.  
Cleveland Wrought Products Co., Cleveland, O.  
Cincinnati—The Acme Machine Tool Co., Cincinnati, Ohio.  
♦ Clark Bros. Bolt Co., Milldale, Conn.  
Columbus Bolt Works, Columbus, O.  
Continental Wood Screw Co., New Bedford, Mass.  
♦ Corbin Screw Corp., New Britain, Conn.  
Coulter-Curtis Screw Co., Inc., Buffalo, N. Y.  
Eastern Bolt & Nut Co., Providence, R. I.  
Eastern Machine Screw Corp., New Haven, Conn.  
Electric Welding Products Co., Cleveland, O.  
Falls River Co., Kent, O.  
♦ Ferry Cap & Set Screw Co., The, Cleveland, O.  
Grammes, L. F. & Sons, Allenstown, Pa.  
Harvey Hubbell Inc., Bridgeport, Conn.  
♦ Howell—Standard Pressed Steel Co., Philadelphia.  
Haskell Mfg. Co., W. H., Pawtucket, R. I.  
Hassell, John, Inc., Brooklyn, N. Y.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Lamson & Sessions Co., Cleveland, O.  
Lubenow Mfg. Co., Milwaukee, Wis.  
Mac-It—Strong, Carlisle Hammond Co., Cleveland, Ohio.  
Metals Welding Co., Cleveland, O.  
Michigan Bolt & Nut Works, Detroit, Mich.  
Morgan Mfg. Co., Inc., Keene, N. H.  
Morrow Mfg. Co., Elmira, N. Y.  
Muncie Cap & Set Screw Co., Muncie, Ind.  
Namco—National Acme Co., Cleveland, O.  
National Marine Lamp Co., New York, N. Y.  
♦ National Screw & Tack Co., Cleveland, O.  
New Britain Machine Co., New Britain, Conn.  
Norman Warner Co., Inc., New York.  
Niagara Screw Co., Buffalo, N. Y.  
♦ Ottemiller, Wm. H., Co., York, Pa.  
Peerless Automatic Machine Co., Cleveland, O.  
Perfection—Foster Bolt & Nut Mfg. Co., Cleveland, Ohio.  
Pheoli Mfg. Co., Chicago, Ill.  
Philadelphia Machine Screw Works, Philadelphia, Pa.  
Phillips, R. B., Mfg. Co., Worcester, Mass.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
Progressive Mfg. Co., Torrington, Conn.  
Reed & Prince Mfg. Co., Worcester, Mass.  
Reed-Prentice Co., Worcester, Mass.  
Reed & Curtis Machine Screw Co., Worcester, Mass.  
Reldy Machine Screw Co., New Haven, Conn.  
Rhode Island Tool Co., Providence, R. I.  
Rochester Machine Screw Co., Rochester, N. Y.  
Specialty Bolt & Rivet Works, Shelton, Conn.  
Standard Gauge Steel Co., Beaver Falls, Pa.  
Standard Nut & Bolt Co., Valley Falls, N. Y.  
♦ Standco—Standard Pressed Steel Co., Philadelphia, Pa.  
Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
Steele & Johnson Mfg. Co., Waterbury, Conn.  
St. Louis Screw Co., St. Louis, Mo.  
Steward & Romaine Mfg. Co., Philadelphia, Pa.  
♦ Upson Nut Co., The, Cleveland, O.  
Wallace Barnes Co., The, Bristol, Conn.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wellmade Screw & Mfg. Co., Fitchburg, Mass.  
Western Automatic Machine Screw Co., The, Elyria, O.  
Western Screw Products Co., St. Louis, Mo.  
Wolverine Brass Works, Grand Rapids, Mich.  
Worcester Machine Screw Co., Worcester, Mass.

**SCREWS, CLOSET.**

- Ampinco—American Pin Co., Waterbury, Conn. (brass and iron).  
Ansonia Mfg. Co., Ansonia, Conn.  
Bernz Co., Otto, Newark, N. J. (brass and iron).  
Butterworth—Butterworth Supply Co., Philadelphia, Pa.  
Chicago Nut Co., Chicago, Ill.  
Elgin Brass Co., The, Cleveland, O.  
Equipolse Rivet Co., The, Waterbury, Conn.  
Glauber Brass Mfg. Co., Cleveland, O.  
Loyal Brass Co., Cleveland, O.  
Richards, Benjamin, & Co., The, Winsted, Conn.  
Rundle Mfg. Co., Milwaukee, Wis.  
Russell Mfg. Co., Inc., The John M., Naugatuck, Conn.  
Waterbury Mfg. Co., Waterbury, Conn.  
Winsted Hardware Mfg. Co., Winsted, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**SCREWS, COACH AND LAG.**

- ♦ American Bolt Co., Birmingham, Ala.  
American Equipment Co., Norristown, Pa.  
♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
♦ American Screw Co., Providence, R. I.  
Atlas Bolt & Screw Co., Cleveland, O.  
Bayonne Bolt & Nut Co., Bayonne, N. J.  
♦ Bethlehem Steel Co., Bethlehem, Pa.  
♦ Buffalo Bolt Co., Buffalo, N. Y.  
Central Brass Works, Cincinnati, O.  
♦ Clark Bros. Bolt Co., Milldale, Conn.  
Continental Bolt & Iron Works, Chicago, Ill.  
Falls Rivet Co., Kent, O.  
Fee & Mason Mfg. Co., New York, N. Y.  
Grabler Square Ges—Grabler Mfg. Co., Cleveland, O.  
♦ Graham Nut Co., Pittsburgh, Pa.  
Hallett Iron Works, The, Harvey, Ill.  
Kansas City Bolt & Nut Co., Kansas City, Mo.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
♦ Lake Erie Bolt & Nut Co., Cleveland, O.  
♦ Lamson & Sessions Co., Cleveland, O.  
Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
♦ Lowell—Lowell Wrench Co., Worcester, Mass.  
♦ McCabe—The McCabe Hanger Mfg. Co., New York, N. Y.  
McGookin, H. D., & Co., Philadelphia, Pa.  
Michigan Bolt & Nut Wks., Detroit, Mich.  
Modern Mfg. Co., Cleveland, O.  
Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
National Marine Lamp Co., New York, N. Y.  
National Supply Co., The, Baltimore, Md.  
National Screw & Tack Co., Cleveland, O.  
New England Bolt & Screw Co., Everett, Mass.  
♦ Oliver—Oliver Iron & Steel Co., Pittsburgh, Pa.  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Perfection—Foster Bolt & Nut Mfg. Co., Cleveland, O.  
Robinson Mfg. Co., The, Cleveland, O.  
Scranton Bolt & Nut Co., Scranton, Pa.  
St. Louis Screw Co., St. Louis, Mo.  
Standard Bolt Co., Columbus, O.  
Standard Nut & Bolt Co., Valley Falls, R. I.  
Steward & Romaine Mfg. Co., Philadelphia, Pa.  
♦ Upson Nut Co., The, Cleveland, O.  
Woods, T. B., Sons Co., Chambersburg, Pa.

**SCREWS, COCK AND BIBB.**

- Good Mfg. Co., Inc., New York, N. Y.  
Haft & Haft, Brooklyn, N. Y.  
Waterbury Mfg. Co., Waterbury, Conn.

**SCREWS, COLLAR.**

- Belco—The Bell Company, Buffalo, N. Y.  
Curtis Screw Co., The, Buffalo, N. Y.  
Hartford Machine Screw Co., Hartford, Conn.  
Niagara Screw Co., Buffalo, N. Y.  
Pawtucket Mfg. Co., Pawtucket, R. I.  
Rochester Machine Screw Co., Rochester, N. Y.  
St. Louis Screw Co., St. Louis, Mo.  
Western Automatic Machine Screw Co., The, Elyria, Ohio.

**SCREWS, DRIVE.**

- ♦ Bethlehem Steel Co., South Bethlehem, Pa.  
♦ National Screw & Tack Co., Cleveland, O.  
Pawtucket Mfg. Co., Pawtucket, R. I.

**SCREWS, HANGER.**

- ♦ American Bolt Co., Birmingham, Ala.  
♦ American Screw Co., Providence, R. I.  
♦ Bethlehem Steel Co., Bethlehem, Pa.  
Buffalo Bolt Co., Buffalo, N. Y.  
Equipolse Rivet Co., The, Waterbury, Conn.  
Haskell Mfg. Co., W. H., Pawtucket, R. I.  
Lamson & Sessions Co., Cleveland, O.  
Michigan Bolt & Nut Works, Detroit, Mich.  
Modern Mfg. Co., The, Cleveland, O.  
Robinson Mfg. Co., The, Cleveland, O.

**SCREWS, HOOK AND EYE.**

(See also "Bolts, Eye and Hook")

- ♦ Bethlehem Steel Co., Bethlehem, Pa.  
♦ Haskell Mfg. Co., Wm. H., Pawtucket, R. I.  
Modern Mfg. Co., The, Cleveland, O.  
Steward & Romaine Mfg. Co., Philadelphia, Pa.  
Tiebout, W. & J., New York, N. Y.  
Wire Goods Co., Worcester, Mass.

**SCREWS, JACK.**

(See "Jackscrews.")

**SCREWS, LATHE DOG.**

- Allen Safety—The Allen Mfg. Co., Inc., Hartford, Conn.  
Keystone Screw Co., Philadelphia, Pa.

**SCREWS, ROLLED THREAD.**

- Hassall, John, Inc., Brooklyn, N. Y.  
Hubbell, Harvey, Inc., Bridgeport, Conn.  
New Haven Rivet Co., New Haven, Conn.

**SCREWS, SERVICE BOX.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Crampton-Farley Brass Co., Kansas City, Mo.  
Hays Mfg. Co., Erie, Pa.  
Wolverine Brass Works, Grand Rapids, Mich.

**SCREWS, SET, HOLLOW OR SAFETY.**

Allen—The Allen Mfg. Co., Inc., Hartford, Conn.  
Ansonia Mfg. Co., Ansonia, Conn.  
Bristol's Safety Set—The Bristol Co., Waterbury, Conn.  
Chicago Screw Co., The, Chicago, Ill.  
Corbin Screw Corp., New Britain, Conn.  
Curtis Screw Works, Buffalo, N. Y.  
Detroit Screw Works, Detroit, Mich.  
Dodge Sales & Engineering Co., Mishawaka, Ind.  
Eagle—Progressive Mfg. Co., Torrington, Conn.  
Foster—New Haven Screw Co., New Haven, Conn.  
Mac-It—The Strong, Carlisle & Hammond Co., Cleveland, O.  
National-Acme Mfg. Co., Cleveland, O.  
Ottemiller, Wm. H., Co., York, Pa.  
St. Louis Screw Co., St. Louis, Mo.  
Standco—Standard Pressed Steel Co., Philadelphia, Pa.  
Steward & Romaine Mfg. Co., Philadelphia, Pa.  
Unbrako—Standard Pressed Steel Co., Philadelphia, Pa.

**SCREWS, SHEET METAL.**

Parker—Parker Supply Co., New York, N. Y.

**SCREWS, SKIN.**

Buffalo Bolt Co., Buffalo, N. Y.  
Lake Erie Bolt & Nut Co., Cleveland, O.  
Michigan Bolt & Nut Works, Detroit, Mich.

**SCREWS, THUMB.**

(See "Nuts and Screws, Thumb or Wing.")

Blake & Johnson Co., Waterbury, Conn.  
Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
Williams, J. E., & Co., Brooklyn, N. Y.

**SCREWS, TOOL POST.**

Mac-It—Strong, Carlisle Hammond Co., Cleveland, Ohio.

**SCREWS, TRAP.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Crampton-Farley Brass Co., Kansas City, Mo.  
Edwardsville Brass Co., Edwardsville, Ill.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
Empire—The Empire Brass Mfg. Co., Cleveland, O.  
Farnan Brass Works, Cleveland, O.  
Fries & Co., Buffalo, N. Y.  
Gibson Bros. Mfg. Co., North Chicago, Ill.  
Glauber Brass Mfg. Co., Cleveland, O.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Haydenville Co., The, Haydenville, Mass.  
Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
Jenkins Mfg. Co., New York, N. Y.  
Kelly & Jones Co., The, Greensburg, Pa.  
Kelly Brass Works, Chicago, Ill.  
Keystone Brass Works, Inc., Erie, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Mueller, H., Mfg. Co., Decatur, Ill.  
Murdock Mfg. & Sup. Co., Cincinnati, O.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Peck Bros. & Co., The, New Haven, Conn.  
Perkes Co., Chas., Philadelphia, Pa.  
Pittsburgh Valve & Fittings Co., Barberton, O.  
Powhatan Brass & Iron Works, Ranson, W. Va.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Seattle Brass Co., Seattle, Wash.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Stebbins Mfg. Co., E., Springfield, Mass.  
Street & Kent Mfg. Co., Chicago, Ill.  
Trefethen, D. A., Taunton, Mass.  
Union Brass & Metal Mfg. Co., St. Paul, Minn.  
Union Metal Works, Chelsea, Mass.  
W. & C. Mfg. Co.—Weir & Craig Co., Chicago, Ill.  
Wolff Mfg. Co., Chicago, Ill.

**SCREWS, WOOD.**

American Screw Co., Providence, R. I.  
Bridgeport Screw Co., Bridgeport, Conn.  
Continental Wood Screw Co., New Bedford, Mass.  
Corbin Screw Corp., New Britain, Conn.  
Gary Screw & Bolt Co., Chicago, Ill.  
Malleable Iron Fittings Co., Branford, Conn.  
National Screw & Tack Co., Cleveland, O.  
Parker, Chas., Co., The, Meriden, Conn.  
Pittsburgh Screw & Bolt Co., Pittsburgh, Pa.  
Reed & Prince Mfg. Co., Worcester, Mass.  
Southington Hardware Co., The, Southington, Conn.  
Topping Bros., New York, N. Y.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**SCRIBERS.**

Browne & Sharpe Mfg. Co., Providence, R. I.  
Goodell-Pratt Co., Greenfield, Mass.  
Starrett Co., The, L. S., Athol, Mass.  
West Haven Mfg. Co., New Haven, Conn.

**SCUFFERS, OR DRAINS, WAREHOUSE FLOOR.**

Watertite Drain & Scupper Co., Inc., New York, N. Y.

**SEALS, LEAD AND WIRE.**

American Casting & Mfg. Co., Brooklyn, N. Y.  
Matthews & Co., Jas. H., Pittsburgh, Pa.  
Peerless Safety—United Seal Co., Columbus, Ohio.

**SEALS, METER, VALVE AND HYDRANT.**

Peerless, Safety, Eureka—United Seal Co., Columbus, Ohio.

**SEARCHLIGHTS.**

General Electric Co., Schenectady, N. Y.  
Grether—Grether Fire Equipment Co., Dayton, Ohio.  
Macloed Co., The, Cincinnati, O.  
National Marine Lamp Co., New York, N. Y.  
Neverut Patent—Rose Mfg. Co., Philadelphia, Pa.  
Nonpareil—S. F. Hayward & Co., New York.  
Searchlight Company, Chicago, Ill.

**SEATINGS, GAGE GLASS.**

Brooks—L. I. Breakey, Marshall, Mich.

**SEATS, BATH TUB.**

American Brass Novelty Co., Grand Haven, Mich.  
Art Brass Co., New York, N. Y.  
Boyle, C. A., & Co., Chicago, Ill.  
Bon Ton—Buffalo Specialty Co., Buffalo, N. Y.  
Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
Brooklyn—Silver & Co., Brooklyn, N. Y.  
Celluvarno—The Silcock-Miller Co., South Orange, N. J. (white).  
Central Specialty Mfg. Co., Chicago, Ill.  
Columbus—The Columbus Brass Co., Columbus, O.  
Eastern—Eastern Specialty Mfg. Co., Scranton, Pa.  
Good—Good Mfg. Co., New York, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Hofinger Mfg. Co., Chicago, Ill.  
Jenkins Mfg. Co., New York, N. Y.  
Leclair Cabinet Works, Edwardsville, Ill.  
Mott Iron Works, The, J. L., Trenton, N. J.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Omaha—The Galard Co., New York, N. Y. (white).  
Parker Co., The Chas., Meriden, Conn.  
Plumbers Woodwork Co., Algoma, Wis.  
Porceloid—Sanitary Specialties Co., Philadelphia, Pa.  
Queen—Queen Manufacturing Co., Chicago, Ill.  
Shwab Bros. Co., New York, N. Y.  
Smith Mfg. Co., E. C., Chicago, Ill.  
S. M. Co.—Searis Mfg. Co., Newark, N. J.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Sternau, S., & Co., Brooklyn, N. Y.  
Tool Designing & Mfg. Co., Cleveland, O.  
Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.  
Wyco-Aseptic—Wyco Products Co., Springfield, Mass.

**SEATS, GLOBE, VALVE, COPPER.**

Huxley—Steam Specialty Co., Boston, Mass.

**SEATS, ROTARY VALVE.**

Boyd—James Boyd & Bros., Philadelphia, Pa.

**SEATS, TANK VALVE.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Good—Good Mfg. Co., Inc., New York, N. Y.  
Liberty Mfg. Co., The, East Norwalk, Conn.  
M. V. B.—Morency-Van Buren Mfg. Co., Sturgis, Mich.

**SEATS, VALVE, OIL WELL.**

Darling Valve & Mfg. Co., Williamsport, Pa.  
Hough Mfg. Co., The Chas. N., Franklin, Pa.  
Steam Economy Co., Chicago, Ill.

**SEATS, WATER CLOSET, ALUMINUM.**

Maxco—Sherwood Brass Works, Detroit, Mich.  
Sherwood—Sherwood Brass Works, Detroit, Mich.

**SEATS, WATER CLOSET, RUBBER.**

Solnue, Whale-Bone-Ite—Brunswick-Balke-Collender Co., The, Chicago.

**SEATS, WATER CLOSET, STEEL, PORCELAIN, ENAMELED.**

Ideal Cabinet, McCord Seal—Ideal Reversible Hinge Cabinet Co., St. Louis, Mo.

**SEATS, WATER CLOSET, SELF RAISING.**

B. O. T.—B. O. T. Mfg. Co., Trenton, N. J.  
Emery—William S. Emery, New York, N. Y.

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Perfection Tank & Seat Co., Syracuse, N. Y.  
Shwab Bros. Co., New York, N. Y.

## SEATS, WATER CLOSET, WOODEN.

Abingdon—Abingdon Seat & Tank Mfg. Co., Abingdon, Ill.  
All-Right—Steel Bond—Allright Mfg. Co., Rural Hall, N. C.  
American Sanitary Works, New York, N. Y.  
American—Jensen's Factory Store, Evansville, Ind.  
Atlas—Knott Mfg. Co., Tell City, Ind.  
Babichairs—Plumbers Woodwork Co., Algoma, Wis.  
Badger Line—Plumbers Woodwork Co., Algoma, Wis.  
B. O. T.—Blanco—B. O. T. Mfg. Co., Trenton, N. J.  
Berglass Mfg. Co., M. P., Brooklyn, N. Y.  
"Blanco (White)"—American Sanitary Works, Trenton, N. J.  
Bre Hygienic—B. R. E. Mfg. Co., Boston, Mass.  
Bull Dog—Wm. Heap & Sons, Grand Haven, Mich.  
C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
Celluvarno—Silcock-Miller Co., South Orange, N. J. (white).  
Century Union—M. P. Berglass Mfg. Co., Brooklyn, N. Y.  
Child's Comfort—Shwab Bros. Co., New York, N. Y.  
Climax—C. F. Church Mfg. Co., Holyoke, Mass. (white).  
Clover Brand—Eichman Mfg. Co., J. C., Baltimore, Md.  
Concord Woodworking Co., Concord, N. H.  
Cowan—Becker Mfg. Co., Marietta, O.  
Cowan Open Seat—The Cowan Mfg. Co., Pittsburgh, Pa.  
Eclipse—The Eclipse Seat Co., Far Rockaway, N. Y.  
Eichman, J. E., Mfg. Co., Baltimore, Md.  
Emery Self-Raising—W. S. Emery, New York, N. Y.  
Globe—Wm. Heap & Sons, Grand Haven, Mich.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Hercules—The Becker Mfg. Co., Marietta, O. (open).  
Indestructible—Wm. S. Emery, New York, N. Y.  
Ivorite—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Ivoroid—Sanitary Specialties Co., Philadelphia, Pa.  
Ivoroid—Haines, Jones & Cadbury Co., Philadelphia.  
Ivory Pyralin—Standard Tank & Seat Co., Inc., Camden, N. J.  
Ivored Covering Co., Waterbury, Conn. (white).  
Jamaco—James Mfg. Co., Canton, O.  
Jones Hollow Ware Co., Baltimore, Md.  
Juvenile—Shwab Bros. Co., New York, N. Y.  
Leclaire Cabinet Works, Edwardsville, Ill.  
Maxco—Sherwood Brass Works, Detroit, Mich.

McLane Quality—McLane Mfg. Co., Milford, N. H.  
Miller-Hubbard Mfg. Co., Sturgis, Mich.  
Mott Iron Works, The J. L., Trenton, N. J.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Neverbreak—Shwab Bros. Co., New York, N. Y.  
Never-Split—Never-Split Seat Co., Evansville, Ind.  
Niagara Mfg. Co., Philadelphia, Pa. (white).  
Omala—The Galarid Co., New York, N. Y. (white).  
Peerless Selling Co., Evansville, Ind.  
Perfect—Standard Tank & Seat Co., Inc., Camden, N. J.  
Perfection—Perfection Tank & Seat Co., Syracuse, N. Y.  
Pfau—The Pfau Mfg. Co., Cincinnati, O.  
Philadelphia Sheet Metal & Wood Works, The, Philadelphia, Pa.  
Porceloid—Sanitary Specialties Co., Philadelphia, Pa.  
Porcelite—William Heap & Sons, Grand Haven, Mich.  
Protecto—The Cowan Mfg. Co., Pittsburgh, Pa.  
Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.  
Queen—Queen Manufacturing Co., Chicago, Ill.  
Re-Enforced—The Columbus Brass Co., Columbus, O.  
Relyo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Richmond Sanitary Mfg. Co., San Francisco, Cal.  
Samson—Van Arnham Mfg. Co., Ft. Wayne, Ind.  
Sanitor—H. W. Johns-Manville Co., New York, N. Y.  
Simco—Silcock-Miller Co., So. Orange, N. J.  
Splitproof—Climax Sanitary Co., Detroit, Mich.  
Square Deal—The Olmstead-Thomson Mfg. Co., New Britain, Conn.  
Standard Celluloid—Standard Tank & Seat Co., Inc., Camden, N. J.  
Stawhite—Niagara Mfg. Co., Philadelphia, Pa.  
Steel Bound—Albright Mfg. Co., Greensboro, N. C.  
Sterling—Wyco Products Co., Springfield, Mass.  
VanArCo—Van Arnham Mfg. Co., Fort Wayne, Ind.  
Vitro—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.  
Wyco—Wyco Products Co., Springfield, Mass.

## SEPARATORS, AMMONIA.

Triumph Electric Co., Cincinnati, O.  
Victor—Steam Appliance Co., West Allis, Wis.

## SEPARATORS, CENTRIFUGAL, OIL FROM METAL CHIPS.

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Oil & Waste Saving Machine Co., Philadelphia, Pa.  
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Curtis—Albert B. Curtis Estate, Worcester, Mass.  
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Swartwout—Ohio Body & Blower Co., Cleveland, O.

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Anthracite Separator Co., Hazleton, Pa.

**SEPARATORS, DUST.**

Bicalky—Hersh & Brother, Allentown, Pa.  
 Buffalo Forge Co., Buffalo, N. Y.  
 ♦ Cyclone—Ohio Body & Blower Co., Cleveland, O.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Lehigh—Hersh Brothers Co., Allentown, Pa.

**SEPARATORS, GASOLINE AND OIL.**

Strong—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Trageser Steam Copper Works, John, New York.

**SEPARATORS, MAGNETIC, METAL AND ORE.**

Buchanan—C. G. Buchanan Co., Inc., New York, N. Y.  
 Caldwell, H. W. & Son Co., Chicago, Ill.  
 Dings—Dings Magnetic Separator Co., Milwaukee, Wis.  
 Dixie Electro Magnet Co., Memphis, Tenn.  
 Magnetic Mfg. Co., Milwaukee, Wis.  
 Noble—Capitol Brass Works, Detroit, Mich.  
 Paxson-Warren—J. W. Paxson Co., Philadelphia, Pa.  
 United—United Iron Works, Kansas City, Mo.

**SEPARATORS OR BOOSTER PUMPS, AIR LIFT.**

Indiana Air Pump Co., Indianapolis, Ind.

**SEPARATORS, RECEIVER, STEAM.**

McAlear Mfg. Co., The, Chicago, Ill.  
 Strong—Strong, Carlisle & Hammond Co., Cleveland, O.

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Pangborn Corporation, Hagerstown, Md.

**SEPARATORS, STEAM, OIL AND WATER.**

Acton—John Acton, Brooklyn, N. Y.  
 Albany—Albany Steam Trap Co., Albany, N. Y.  
 Allentown Experimental Works, Allentown, Pa.  
 Ambrose Machine Co., Brooklyn, N. Y.  
 American District Steam Co., North Tonawanda, N. Y.  
 American—Whitlock Coil Pipe Co., Hartford, Conn.  
 Anderson—The V. D. Anderson Co., Cleveland, O.  
 Ansonia Sanitary Mfg. Co., New York, N. Y.  
 Austin—Wright-Austin Co., Detroit, Mich.  
 Automatic Vacuum—Illinois Engineering Co., Chicago, Ill.  
 Baldwin—Ross & Taggart, New York, N. Y.  
 Bundy—Griscom-Russell Co., New York, N. Y.  
 ♦ Cochrane—H. S. B. W. Cochrane Corp., Philadelphia, Pa.  
 Colles Heater & Specialty Co., Chicago, Ill.  
 ♦ Cookson—The D. T. Williams Valve Co., Cincinnati, O.  
 Crook, H. E., Co., Inc., Baltimore, Md.  
 De Rycke—Provost Engineering Co., Brooklyn, N. Y.  
 Detroit—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Direct Separator Co., Syracuse, N. Y.  
 Dunham, C. A., Co., Inc., Chicago, Ill.  
 Eclipse Feed Water Heater & Purifier Co., Oshkosh, Ill.  
 Elliott—Elliott Co., Jeannette, Pa.  
 Exeter Machine Works, Exeter, N. H.  
 ♦ Gardner Governor Co., The, Quincy, Ill.  
 Garrett, W. D., & Co., New York, N. Y.  
 Hardie-Tynes Mfg. Co., Birmingham, Ala.  
 Hine—James L. Robertson & Sons, New York, N. Y.  
 Hoppes—The Hoppes Mfg. Co., Springfield, O.  
 Improved—Julian d'Este Co., Boston, Mass.  
 Kelley—Patterson-Kelley Co., The, New York, N. Y.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Krause Absorbent—A. E. Krause, Jersey City, N. J.  
 Kutztown Foundry & Machine Co., Kutztown, Pa.  
 Lindstrom—Allentown Experimental Works, Allentown, Pa.  
 Lindstrom—Plant Engineering & Equipment Co., New York, N. Y.  
 Lowden—Chas. Jacobs & Co., Boston, Mass.  
 McAlear Mfg. Co., Chicago, Ill.  
 ♦ McDaniel—Watson & McDaniel Co., Philadelphia, Pa.  
 Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
 Mosher—United Machine & Mfg. Co., Canton, Ohio.  
 Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
 National—National Separator & Machine Co., Boston, Mass.

National—The National Pipe Bending Co., New Haven, Conn.

Otis—Stewart Heater Co., Buffalo, N. Y.

Packard—The Marion Incline Filter & Heater Co., Marion, O.

Pangborn—Thomas W. Pangborn Co., New York (compressed air).

Patterson—Ernst & Co., Newark, N. J.

Peeco—Plant Engineering Equipment Co., New York, N. Y.

Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.

The Potter—Potter Separator Co., Newburgh, N. Y.

Raymond Bros. Import Pulverizer Co., Chicago, Ill. (air).

Schutte & Koerting Co., Philadelphia, Pa.

Simonds—Simonds Heating & Specialty Co., Detroit, Mich.

Sims—The Sims Co., Erie, Pa.

Springfield—National Separator & Machine Co., Boston, Mass.

Sterling—Sterling Engineering Co., Milwaukee, Wis.

St. Louis—Ruemmelli-Dawley Mfg. Co., The, St. Louis, Mo.

Stickle Triplex—Open Coil Heater & Purifier Co., Indianapolis, Ind.

Stratton—Griscom-Russell Co., New York, N. Y.

Strong—The Strong, Carlisle & Hammond Co., Cleveland, O.

Swartwout—The Ohio Body & Blower Co., Cleveland, O.

Sweet's—The Direct Separator Co., Syracuse, N. Y.

Tolhurst Machine Works, Troy, N. Y.

Trageser, John, Steam Copper Works, New York, N. Y.

Triumph—The Steam Appliance Co., West Allis, Wis.

United Iron Works Co., Kansas City, Mo.

Utility—Standard Steam Specialty Co., New York.

Vater—Two Stage—Power Plant Specialty Co., Chicago.

Victor—The Steam Appliance Co., West Allis, Wis.

♦ Walworth Mfg. Co., Boston, Mass.

Washington—Petroleum Iron Works Co., Sharon, Pa.

Webster—Warren Webster & Co., Camden, N. J.

Weld & Co., Geo. A., Boston, Mass.

Welder—Elliott Co., Pittsburgh, Pa.

Whitlock Coil Pipe Co., The, Hartford, Conn.

W. & McD.—Watson & McDaniel Co., Philadelphia, Pa.

Wyoming—W. H. Nicholson & Co., Wilkesbarre, Pa. (trap combined).

XX Century—Atwood & Morrill, Salem, Mass.

**SETS, ANGLE.**

Johansson—C. E. Johansson, Inc., Poughkeepsie, N. Y.

**SETS, COMBINATION.**

Starrett Co., The L. S., Athol, Mass.

**SETS, ENGINEERS' OILER.**

American Tube & Stamping Co., Bridgeport, Conn.

Deverall's—Deverall Perfection Mfg. Co., Brooklyn.

Eagle Mfg. Co., Wellsburg, W. Va.

♦ Gem—Gem Mfg. Co., Pittsburgh, Pa.

Hall's—Hall Mfg. Co., Harrison, N. J.

Knapp Mfg. & Supply Co., The, New York, N. Y.

Manhattan Brass Co., New York, N. Y.

National Marine Lamp Co., New York, N. Y.

♦ Noera Mfg. Co., The, Waterbury, Conn.

Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.

Wall Mfg. & Supply Co., The P., Pittsburgh, Pa.

**SETS, RYELET.**

Johnson, Wm., Newark, N. J.

**SETS, HYDRANT, LEATHER.**

Algco—Auburn Leather Goods Co., Auburn, N. Y.

Anti Roll—The S. & I. Co., Springfield, Mass.

Barwood, L. J., Mfg. Co., Stoneham, Mass.

**SETS, NAIL AND BRAD.**

D. R. Barton—Mack & Co., Rochester, N. Y.

Braunsdorf-Mueller Co., Elizabeth, N. J.

Brown & Sharpe Mfg. Co., Providence, R. I.

Buck Bros., Millbury, Mass.

♦ Buffum Tool Co., Louisiana, Mo.

Bullock Best—Bullock Mfg. Associates, Springfield, Mass.

Chapin-Stephens Co., Pine Meadow, Conn.

Cronk's—The Cronk & Carrier Mfg. Co., Elmira, N. Y.

Diener, Geo. W., Mfg. Co., Chicago, Ill.

Goodell-Pratt Co., Greenfield, Mass.

Handy Klitt—Bullock Mfg. Associates, Springfield, Mass.

Irvington Mfg. Co., Irvington, N. J.

Johnson, Wm., Newark, N. J.

Kraeuter & Co., Newark, N. J.

Mayhew Steel Products, Inc., New York, N. Y.

Nobby—Bullock Mfg. Associates, Springfield, Mass.

Peck—West Haven Mfg. Co., West Haven, Conn.

Pioneer—The Southington Mfg. Co., Southington, Conn.

Sawyer Tool Mfg. Co., Fitchburg, Mass.

Sharpen Ezy—H. D. Smith & Co., Plantsville, Conn.



Stanley Rule & Level Co., New Britain, Conn.  
 Starratt Co., The L. S., Athol, Mass.  
 Syracuse, Novol—Syracuse Twist Drill Co., Syracuse, N. Y.  
 Tuck Mfg. Co., Brockton, Mass.  
 Union Tool Co., Springfield, Mass.  
 Vaughan & Bushnell Mfg. Co., Chicago, Ill.  
 Victor—Victor Saw Works, Springfield, O.

**SETS, RIVET.**

American Die & Tool Co., Reading, Pa.  
 Boker, H., & Co., Inc., New York, N. Y.  
 Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Buffum Tool Co., Louisiana, Mo.  
 Chicago Pneumatic Tool Co., New York.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Henderer, A. L., & Sons, Wilmington, Del.  
 Hunter Saw & Machine Co., Pittsburg, Pa.  
 Ingersoll-Rand Co., New York.  
 Irvington Mfg. Co., Irvington, N. J.  
 Johnson, Wm., Newark, N. J.  
 Kraeuter & Co., Inc., Newark, N. J.  
 Lewthwaite Co., New York, N. Y.  
 Lovejoy Tool Works, Chicago, Ill.  
 Lowentraut Mfg. Co., P., Newark, N. J.  
 L. X.—Manufacturers' Belt Hook Co., Chicago, Ill.  
 National Tool Co., Brooklyn, N. Y.  
 Niagara Machine & Tool Co., Buffalo, N. Y.  
 Paragon Tool Co., Seattle, Wash.  
 Peck, Stow & Wilcox Co., New York, N. Y.  
 Rich—Rich Tool Co., Chicago, Ill.  
 Sayre, L. A., Company, Newark, N. J.  
 S. & I. Co., The, Springfield, Mass.  
 Vanadium—Geo. F. Marchant Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Williams, J. H. & Co., Brooklyn, N. Y.

**SETS, SAW.**

Atkins, E. C., & Co., Indianapolis, Ind.  
 B. B.—Bergman Tool Mfg. Co., Buffalo, N. Y.  
 Buckeye Vise Co., Cleveland, O.  
 Bullock Mfg. Associates, Springfield, Mass.  
 Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
 Crowell, D. J., Buffalo, N. Y.  
 Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Johnson, Wm., Newark, N. J.  
 Kilborn & Bishop Co., New Haven, Conn.  
 Little Giant—The Ambler Saw Mfg. Co., Natick, Mass.  
 Morrill Apex—Chas. Morrill, New York, N. Y.  
 Morrill Pattern—Clipper Tool Co., Buffalo, N. Y.  
 Ohlen-Bishop Co., The, Columbus, O.  
 Peck, Stow & Wilcox Co., Southington, Conn.  
 Smith, Otis A., Rockfall, Conn.  
 Special—Chas. Morrill, New York, N. Y.  
 Stanley Rule & Level Co., The, New Britain, Conn.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Tainter Positive—Tainter Mfg. Co., New York.  
 Uniform—J. O. Pettet, Belvidere, Ill.  
 Vander—Van Doren Mfg. Co., Chicago Heights, Ill.

**SETS, VENTILATING, PORTABLE.**

American Blower Co., Detroit, Mich.  
 Ilg Electric Ventilating Co., Chicago, Ill.  
 Sturtevant Co., B. F., Hyde Park, Mass.

**SETTERS, SAW.**

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 Machinery Co. of America, Big Rapids, Mich.  
 Massachusetts Blower Co., Watertown, Mass.  
 New Britain Machine Co., New Britain, Conn.  
 Wardwell Mfg. Co., The, Cleveland, O.

**SETTERS, STUD, AUTO-OPENING.**

Errington Mechanical Laboratory, New York, N. Y.

**SETTINGS, BOILER.**

Betson Plastic Fire Brick Co., Rome, N. Y.  
 Harbison Walker Refractories Co., Pittsburg, Pa.  
 H-S-G—Houston, Stanwood & Gamble Co., Cincinnati, O.  
 McLeod & Henry Co., Troy, N. Y.  
 Seal-A-Set—The Arco Company, Cleveland, O.  
 Walsh & Weidner Boiler Co., The, Chattanooga, Tenn.

**SETTINGS, WATER METER**

Ford—Ford Meter Box Co., Wabash, Ind.

**SHACKLES AND CLEAVES, CHAIN.**

Ferry Cap & Set Screw Co., Cleveland, O.  
 Fischer & Hayes Rope Co., Chicago, Ill.  
 Fulton Machine & Forging Co., Canal Fulton, O.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 McGookin, D. H., & Co., Philadelphia, Pa.  
 McMillan's, W. H., Sons, New York, N. Y.  
 Merrill Brothers, Massena, New York, N. Y.  
 Newhall Chain, Forge & Iron Co., New York.  
 Spang & Co., Butler, Pa. (marine).  
 Standard Chain Co., Pittsburgh, Pa.  
 United States Chain & Forging Co., Pittsburgh, Pa.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.



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 Coates Clipper Mfg. Co., Worcester, Mass.  
 Errington Mechanical Laboratory, New York, N. Y.  
 Fischer, Chas., Spring Co., New York.  
 Gem—Gem Mfg. Co., Pittsburgh, Pa.  
 Plank Flexible Shaft Machine Co., Grand Rapids, Mich.  
 Stow Mfg. Co., Binghamton, N. Y.  
 W. A. Strand & Co., Chicago, Ill.  
 Webb—Webb Mfg. Co., Newark, N. J.

**SHAPING, STEEL.**

Allen Machine Co., Erie, Pa.  
 American Steel & Wire Co., Chicago, Ill.  
 American Tool & Machine Co., Boston, Mass.  
 Blake, H. A., & Son, Cheboygan, Mich.  
 Bliss & Laughlin, Inc., Harvey, Ill.  
 Blymer Iron Works Co., The, Cincinnati, O.  
 Bond Foundry & Machine Co., Manheim, Pa.  
 Brightman Machine Co., The, Cleveland, O.  
 Brown Co., The A. & F., New York, N. Y.  
 Caldwell & Son Co., W. H., Chicago, Ill.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Chain-Belt Mfg. Co., Milwaukee, Wis.  
 Christiansa Machine Co., Christiansa, Pa.  
 Columbia Steel & Shafting Co., Pittsburgh, Pa.  
 Compressed—Compressed Steel & Shafting Co., Boston, Mass.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Cumberland Steel Co., Cumberland, Md.  
 Delaware Steel Co., New York, N. Y.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Fitzsimons Eclipse—The Fitzsimons Co., Youngstown, O.  
 Franklin Machine Co., Providence, R. I.  
 Frasse, Peter A., & Co., Inc., New York, N. Y.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 Hill Clutch Co., The, Cleveland, O.  
 Hunter Machine Co., James, North Adams, Mass.  
 Jeffrey Mfg. Co., The, Columbus, O.  
 J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Jones, W. A., Foundry & Machine Co., Chicago, Ill.  
 Lane & Bodley Co., The, Cincinnati, O.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Minster Machine Co., The, Minster, O.  
 Moltrup Steel Products Co., Beaver Falls, Pa.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Pardee, C., Works, The, Perth Amboy, N. J.  
 Pittsburgh Shafting Co. of Detroit, Detroit, Mich.  
 Reading Iron Co., Reading, Pa.  
 Reading Scale & Machine Co., Reading, Pa.  
 Republic Iron & Steel Co., Youngstown, O.  
 Royersford Foundry & Machine Co., Philadelphia, Pa.  
 Scully Steel & Iron Co., Chicago, Ill.  
 Sellers, William, & Co., Inc., Philadelphia, Pa.  
 Tioga Steel & Iron Co., Philadelphia, Pa.  
 Union Drawn—Union Drawn Steel Co., Beaver Falls, Pa.  
 Upton & Gilman Machine Co., Lowell, Mass.  
 Valley Iron Works, Williamsport, Pa.  
 Webster Mfg. Co., Chicago, Ill.  
 Wolf Co., The, Chambersburg, Pa.  
 Wood's Sons Co., T. B., Chambersburg, Pa.

**SHAFTS, CRANK AND CARRYING.**

Anderson Forke & Machine Co., Detroit, Mich.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Leard, Wm., Co., New Brighton, Pa.  
 Moltrup Steel Products Co., Beaver Falls, Pa.  
 Sizer Forge Co., Buffalo, N. Y.  
 Standard Gauge Steel Co., Beaver Falls, Pa.  
 Tindel-Morris Co., Eddystone, Pa.  
 Williams, J. E., & Co., Brooklyn, N. Y.

**SHAFTS, LINE SPEED GOVERNING.**

Cedar Rapids Foundry & Machine Co., Inc., Cedar Rapids, Ia.

**SHAKERS, SCREEN, PNEUMATIC.**

Hanna—Vulcan Engineering Sales Co., Chicago, Ill.

**SHAFTS, PROPELLOR.**

Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.

**SHANKS, SAW.**

♦Hoe—R. Hoe & Co., New York.

**SHAPERS (METALWORKING).**

American—The American Tool Works Co., Cincinnati.  
Bertschy Mattison—Bertschy Engineering Co., Cedar Rapids, Ia.

Boynston & Plummer, Inc., Chester Depot, Vt.  
Brown Engineering Co., Reading, Pa.  
Cincinnati Universal—Cincinnati Shaper Co., The, Cincinnati, O.

Cochrane-Bly Co., Rochester, N. Y. (vertical die).  
Columbia—Columbia Machine Tool Co., Hamilton, O.  
Crescent Machine Co., Leetonia, O.

Davis Machine Tool Co., Inc., Rochester, N. Y.  
Davis, W. P., Machine Co., Rochester, N. Y.  
Fitchburg Machine Works, Fitchburg, Mass.  
Flather Planer & Shaper Co., Nashua, N. H.  
Fox Machine Co., Grand Rapids, Mich.

Garvin Machine Co., The, New York, N. Y.  
Hendy Machine Co., The, Torrington, Conn.  
High Duty—Gould & Eberhardt, Newark, N. J.

Kelly—R. A. Kelly Co., Xenia, O.  
Milwaukee—Lutter & Gies Co., Milwaukee, Wis.  
Milwaukee Shaper Co., Milwaukee, Wis.

Morton Mfg. Co., Muskegon Heights, Mich. (Draw cut and special railway.)

Niles-Bement-Pond Co., New York, N. Y.  
Ohio—Ohio Machine Tool Co., The, Kenton, O.  
Perkins—Perkins Machine Co., Warren, Mass. (friction).

Potter & Johnston Machine Co., Pawtucket, R. I.  
Pratt & Whitney Co., Hartford, Conn.

Queen City Machine Tool Co., Cincinnati, O.  
Rhodes—Rhodes Mfg. Co., Hartford, Conn.  
Rockford—Rockford Machine Tool Co., Rockford, Ill.

Sellers, Wm., & Co., Inc., Philadelphia, Pa.  
Sellew Machine Tool Co., Pawtucket, R. I.

Smith & Mills—The Smith & Mills Co., Cincinnati, O.  
Springfield Machine Tool Co., Springfield, O.

Stamco—Streine Tool & Mfg. Co., New Bremen, O.  
Steptoe—John Steptoe Co., Cincinnati, O.

Stockbridge Machine Co., Worcester, Mass.  
Walcott Lathe Co., Jackson, Mich.

Whipp—Whipp Machine Tool Co., Sidney, O.  
Whitcomb-Blaisdell Machine Tool Co., Worcester, Mass. (portable).

**SHAPERS, SAW SWAGE.**

Armstrong—Armstrong Mfg. Co., Portland, Ore.

♦Atkins, E. C. & Co., Indianapolis, Ind.  
Champion—A. E. White Machine Works, Eau Claire, Wis.

Crowell, D. J., Buffalo, N. Y.  
Pribnow—Pribnow Swage & Tool Works, Sheboygan, Wis.

**SHAPERS, WOODWORKING.**

(See also "Machinery, Woodworking.")

Advance—Advance Machinery Co., Van Wert, O.  
American Saw Mill Machinery Co., Hackettstown, N. J.

♦Crescent Machine Co., Leetonia, O.  
Ober—Ober Mfg. Co., Chagrin Falls, Ohio.  
Oliver—Oliver Machinery Co., Grand Rapids, Mich.

Sidney Tool Co., The, Sidney, O.  
Whitney—Whitney, Baxter D., & Son, Inc., Winchendon, Mass.

**SHAPES, PRESSED STEEL.**

♦American Pulley Co., The, Philadelphia, Pa.  
Bemaco—A. J. Beaton Mfg. Co., New Britain, Conn.  
Bevin Bros. Mfg. Co., East Hampton, Conn.

Illinois Steel Co., Chicago, Ill.  
Jannay, Steinmetz & Co., Philadelphia, Pa.  
New Process—New Process Steel Corporation, Lancaster, Pa. (cold drawn).

Pardee Works Co., Perth Amboy, N. J.  
Prest-O-Lite—Prest-O-Lite Co., Inc., Indianapolis, Ind.

♦Standard Pressed Steel Co., Philadelphia, Pa.  
Union Spring & Mfg. Co., Pittsburgh, Pa.  
Worcester Pressed Steel Co., Worcester, Mass.

**SHARPENERS, DRILL STEEL.**

Denver Rock Drill Mfg. Co., Denver, Colo.  
Oliver & Adrian—Oliver Instrument Co., Adrian, Mich.

**SHARPENERS, FILE.**

McLeod Co., The, Cincinnati, O.  
♦Republic Iron & Steel Co., Youngstown, O.

**SHARPENERS, KNIFE AND SHEAR.**

Johnson—E. P. Johnson Rule Mfg. Co., Chicago, Ill.  
New England Novelty Works, Hill, N. H.  
Pike Mfg. Co., Pike, N. H.

**SHARPENERS, MACHINE SCRAPER.**

Plurality Die—Mummert-Dixon Co., Hanover, Pa.

**SHARPENERS, FLOW BLADE.**

Justrite—Strite Governor Pulley Co., Minneapolis, Minn.

**SHARPENERS, ROCK DRILL.**

American—Heald Machine Co., Worcester, Mass.  
Denver—Denver Rock Drill Mfg. Co., Denver, Colo.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co., New York, N. Y.  
Lackawanna Steel Co., Lackawanna, N. Y.  
Leyner, J. Geo., Engineering Works Co., Littleton, Colo.  
Sullivan Machinery Co., Chicago, Ill.

**SHARPENERS OR GRINDERS, SAW.**

♦Atkins—E. C. Atkins & Co., Indianapolis, Ind.  
Armstrong Mfg. Co., Portland, Ore.  
Automatic, Berry—O. V. Hooker & Son, St. Johnsbury, Vt.

Cochrane-Bly Co., Rochester, N. Y. (automatic for metal saws).

Covel—Covel Mfg. Co., Benton Harbor, Mich.  
Crown—Clizbe Bros. Mfg. Co., Plymouth, Ind.

Eagle—Frank R. Rogers, Buffalo, N. Y.  
Espen—Lucas Machine Works, Philadelphia, Pa.

Foley-Wardwell Mfg. Co., Cleveland, O.  
Hunter Saw & Machine Co., Pittsburg, Pa.

Ideal—Nutter & Barnes Co., Hinsdale, N. H.  
Keystone—Rothfuss-Howard Iron Works, Williamsport, Pa.

♦Machinery Company of America, Big Rapids, Mich.  
Oliver Machinery Co., Grand Rapids, Mich.  
Pribnow—Pribnow Swage & Tool Works, Sheboygan, Wis.

Q. M. S.—Hanna Engineering Works, Chicago, Ill.  
Rogers, Buffalo—Rogers, S. C. & Co., Buffalo, N. Y.

Simplex—Lea Equipment Co., Philadelphia, Pa.  
Wardwell Mfg. Co., The, Cleveland, O.

**SHEAR BLADES, FOR SHEET AND TIN PLATE MILLS.**

O. K. Co.—Ohio Knife Co., Cincinnati, Ohio.

**SHEARS, BELT, RUBBER AND PACKING.**

Boker Cutlery & Hdwe. Co., Inc., New York.  
Compton Reliance—W. H. Compton Shear Co., Newark, N. J.

Heinisch, R., Sons Works, Newark, N. J.  
National—The National Cutlery Co., Philadelphia, Pa.

North Bros. Mfg. Co., Philadelphia, Pa.  
Watson-Stillman Co., Aldene, N. J.

J. Wiss & Sons Co., Newark, N. J.

**SHEARS, GUILLOTINE.**

Perkins Machine Co., Warren, Mass.

**SHEARS, HYDRAULIC.**

♦Bethlehem Steel Co., Bethlehem, Pa.  
Camden Iron Works, Camden, N. J.  
Chambersburg Engineering Co., Chambersburg, Pa.

Garrison A., Foundry Co., Pittsburg, Pa.  
Henderer's Sons, A. L., Wilmington, Del.

Mackintosh, Hemphill & Co., Pittsburg, Pa.  
Mesta Machine Co., Pittsburg, Pa.

Morgan Engineering Co., Alliance, Ohio.  
Niles-Bement-Pond Co., New York, N. Y.

Ryerson, Joseph T., & Son, Chicago, Ill.  
United Engineering & Foundry Co., Pittsburg, Pa.

Watson-Stillman Co., New York, N. Y.  
Wood & Co., R. D., Philadelphia, Pa.

**SHEARS, METAL CUTTING, BELT OR MOTOR DRIVEN.**

Badger State—Badger State Machine Co., Janesville, Wis.

Beloit—Hendley & Whittemore Co., Beloit, Wis.  
Bertsch & Co., Cambridge City, Ind.

Bliss, E. W., Co., Brooklyn, N. Y.  
Buffalo Forge Co., Buffalo, N. Y.

Cleveland—Cleveland Punch & Shear Works Co., Cleveland, O.

Covington Machine Co., Covington, Va.  
Doelger & Kirsten, Milwaukee, Wis.

Erie—Erie Foundry Co., Erie, Pa.  
Excelsior—Excelsior Tool & Mach. Co., East St. Louis, Ill.

Farrell Foundry & Machine Co., Ansonia, Conn.  
Ferracute Machine Co., Bridgeton, N. J.

Garrison A., Foundry Co., Pittsburg, Pa.  
Heartley Machine Variety Iron & Tool Works, Toledo, O.

Helwig Mfg. Co., St. Paul, Minn. (pneumatic).  
Hilles & Jones Co., Wilmington, Del.

Hinman—D. A. Hinman & Co., Sandwich, Ill.  
Ironton Punch & Shear Co., Ironton, O.

Long & Allstatter Co., The, Hamilton, O.  
Mafreto Machine & Tool Co., Worcester, Mass.

McCabe, J. J., Lathe & Machy Corp., New York, N. Y.  
Mesta—Mesta Machine Co., Pittsburgh, Pa.

Niagara Machine & Tool Works, Buffalo, N. Y.  
 Niles-Bement-Pond Co., New York, N. Y.  
 Ohl—Geo. A. Ohl & Co., Newark, N. J.  
 Pels, Henry, & Co., New York, N. Y.  
 Pitman—The Youngstown Foundry & Machine Co.,  
 Youngstown, O.  
 Racine Tank Lug Co., The, Racine, Wis.  
 Rock River Machine Co., Janesville, Wis.  
 Roe—Glasgow Iron Works, Pottstown, Pa.  
 ♦Rorysford Foundry & Machine Co., Rorysford, Pa.  
 Ryerson, Joseph T., & Son, Chicago, Ill.  
 Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Standard Bridge Tool Co., Pittsburgh, Pa.  
 Stoll, D. H., Co., Buffalo, N. Y.  
 Thomas Spacing Machine Co., Pittsburg, Pa.  
 Toledo—The Toledo Machine & Tool Co., Toledo, O.  
 Winship Mfg. Co., The, Racine, Wis.

#### SHEARS, METAL CUTTING, HAND AND FOOT POWER.

Badger—Rock River Machine Co., Janesville, Wis.  
 Badger State—Badger State Machine Works, Beloit,  
 Wis. (Alligator angle iron, bench splitting.)  
 Bartlett—Bartlett Mfg. Co., Detroit, Mich.  
 Beatty Machine & Mfg. Co., Hammond, Ind.  
 Bellefonte Engineering Co., Bellefonte, Pa.  
 Beloit—Hendley & Whittemore Co., Beloit, Wis.  
 Bliss, E. W. Co., Brooklyn, N. Y.  
 Buffalo Forge Co., Buffalo, N. Y.  
 ♦Canton Foundry & Machine Co., Canton, O.  
 ♦Champion Blower & Forge Co., Lancaster, Pa.  
 Cedar Rapids Foundry & Machine Co., Inc., Cedar  
 Rapids, Ia.  
 Clipper—Imperial Machine Co., Minneapolis, Minn.  
 Clough, R. M., Meriden, Conn.  
 Eclipse—Geo. C. Christopher & Son., Wichita, Kan.  
 Erie—Erie Foundry Co., Erie, Pa.  
 Excelsior—Excelsior Tool & Mach. Co., East St.  
 Louis, Ill.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Hendley & Whittemore Co., Beloit, Wis.  
 Hercules—W. F. & C. E. Tucker, Hartford, Conn.  
 Hilles & Jones Co., Wilmington, Del.  
 Hinman—D. A. Hinman & Co., Sandwich, Ill.  
 Kane & Roach, Syracuse, N. Y.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Lay & Nawrath Co., Newark, N. J.  
 Lewthwaite, Geo. A. Co., New York, N. Y.  
 Little Blacksmith—Kidder Mfg. Co., J. F., Burlington,  
 Vt.  
 Little Giant—Little Giant Punch & Shear Co., Sparta,  
 Illinois.  
 Little Giant—W. D. Mohn & Co., Reading, Pa.  
 Little Giant—Danville Iron & Steel Co., Danville, Pa.  
 Lyon—Lyon, Conklin & Co., Inc., Baltimore, Md.  
 M & M—Mitts & Merrill, Saginaw, Mich.  
 Mafreto Machine & Tool Co., Worcester, Mass.  
 Marshalltown—Federal Gauge Co., Chicago, Ill.  
 ♦Marvel—Armstrong-Blum Co., Chicago, Ill.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Morgan Construction Co., Worcester, Mass.  
 National Machinery Co., Tiffin, O.  
 Niagara Machine & Tool Works, Buffalo, N. Y.  
 Oliver Mfg. Co., The, W. W., Buffalo, N. Y.  
 Ovenden, W. C., West Roylton, Mass.  
 Pacific Machine Tool Co., Los Angeles, Cal.  
 Pels—Henry Pels & Co., New York, N. Y.  
 Quickwork Co., The, St. Marys, O. (Irregular cutting.)  
 Robinson, J. M., Mfg. Co., Cincinnati, Ohio.  
 Schatz Mfg. Co., Poughkeepsie, N. Y.  
 St. Louis Sales Co., St. Louis, Mo.  
 Stoll, D. H., Co., Inc., Buffalo, N. Y.  
 Streine Tool & Mfg. Co., New Bremen, O.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.  
 ♦Union—Union Mfg. Co., New Britain, Conn.  
 United Engineering & Foundry Co., Pittsburgh, Pa.  
 Victor—Novelty Iron Works Co., Dyersville, Ia.  
 Waterbury-Farrell Foundry & Machine Co., The,  
 Waterbury, Conn.  
 Wauchs Patent—Horton Machine Works, Inc., Elmira,  
 N. Y.  
 Wheeling Mold & Foundry Co., Wheeling, W. Va.  
 Whitney—Whitney Metal Tool Co., Rockford, Ill.  
 Williams, White & Co., Moline, Ill.  
 Winner—Imperial Machine Co., Minneapolis, Minn.  
 Young Machine & Tool Co., New York, N. Y.

#### SHEARS, METAL CUTTING, ROTARY.

Bliss, E. W. Co., Brooklyn, N. Y.  
 Cleveland—Buckeye Engine Co., Salem, O.  
 Detrick & Harvey Machine Co., Baltimore, Md.  
 Garrison, A., Foundry Co., Pittsburgh, Pa.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Hilles & Jones Co., East Wilmington, Del.  
 Niagara Machine Tool Works, Buffalo, N. Y.  
 Ohl—Geo. A. Ohl & Co., Newark, N. J.  
 Quickwork Co., The, St. Marys, Ohio.  
 Rapid—Otis L. Fuller, Goshen, Ind.  
 Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.  
 Union Foundry & Machine Co., Pittsburgh, Pa.

Wickes Bros, Saginaw, Mich.  
 Yoder—The C. M. Yoder Co., Cleveland, O.

#### SHEARS, SCRAP IRON CUTTING.

Camden Iron Works, Camden, N. J.  
 Doelger & Kirsten, Milwaukee, Wis.

#### SHEARS, SPLITTING, POWER (BOILERMAKERS).

Badger State—Badger State Machine Works, Beloit,  
 Wis.  
 Beloit—Hendley & Whittemore Co., Beloit, Wis.  
 Heartley Machine Variety Iron & Tool Works, Toledo,  
 Ohio.  
 Marshalltown—Federal Gauge Co., Chicago, Ill.

#### SHEARS, TIE, COTTON BALE.

Howlett—P. L. Howlett, Brownwood, Tex.

#### SHEATHING, COPPER.

(See "Copper, Sheet" and "Metal, Yellow.")

#### SHEAVES AND ROLLERS, INCLINE.

Sanford-Day Iron Works, Knoxville, Tenn.

#### SHEAVES, ROPE, POWER TRANSMISSION.

American Foundry & Mfg. Co., St. Louis, Mo.  
 American—American Hoist & Derrick Co., St. Paul,  
 Minn. (wire).  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Bass Foundry & Machine Co., The, Fort Wayne, Ind.  
 Brown, A. & F., Co., New York, N. Y.  
 Caldwell, W. H., & Son Co., Chicago, Ill.  
 Christiansa Machine Co., Christiansa, Pa.  
 Connellsville Machine & Car Co., Connellsville, Pa.  
 Crawford & McCrimmon Co., Brazil, Ind.  
 Cresson-Morris Co., Philadelphia, Pa.  
 Diamond Machine Co., Monongahela, Pa.  
 ♦Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Fair Haven Foundry & Machine Co., Fair Haven, Vt.  
 Falls Rivet & Machine Co., Cuyahoga Falls, O.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Golden's Foundry & Machine Co., Columbus, O.  
 Great Western Mfg. Co., Leavenworth, Kan.  
 ♦Hill Clutch Co., The, Cleveland, O.  
 Howard Clutch Co., Cleveland, O.  
 ♦Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 ♦Jones Foundry & Machine Co., W. A., Chicago, Ill.  
 Lake Shore Engine Works, Marquette, Mich.  
 Litchfield Foundry & Machine Co., Litchfield, Ill.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 ♦Medart—Medart Patent Pulley Co., St. Louis, Mo.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Mesta—Mesta Machine Co., Pittsburgh, Pa.  
 Minster Machine Co., The, Minster, O.  
 Montgomery Coal Washing & Mfg. Co., Birmingham,  
 Ala.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 ♦Ohio Valley Pulley Works, Inc., Maysville, Ky.  
 Ottumwa Iron Works, Ottumwa, Ia.  
 Pyott Foundry Co., Chicago, Ill.  
 Pyott, Geo. W., Co., Chicago, Ill.  
 Sprout, Waldron & Co., Muncy, Pa.  
 ♦Webster Mfg. Co., Tiffin, O.  
 Weller Mfg. Co., Chicago, Ill.  
 ♦Wood's Sons Co., T. B., Chambersburg, Pa.

#### SHEAVES, TACKLE BLOCK.

♦Anvil—Western Block Co., Lockport, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Hercules Forge Co., Indianapolis, Ind.  
 Clyde Iron Works, Duluth, Minn.  
 Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
 Howard Iron Works, Buffalo, N. Y.  
 ♦J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 McMillan's Sons, W. H., New York, N. Y.  
 Oshkosh Mfg. Co., Oshkosh, Wis.  
 Torry Roller Bushing Works, Bath, Me.  
 ♦Western Block Co., Lockport, N. Y.

#### SHEAVES, WIRE AND MANILA ROPE.

Link-Belt Company, Chicago and Philadelphia, Pa.  
 ♦Medart—Medart Patent Pulley Co., St. Louis, Mo.  
 The Reeves—Reeves Pulley Co., Columbus, Ind.  
 ♦Western Block Co., Lockport, N. Y.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

#### SHEETS, ALLOY COATED.

American Rolling Mill Co., Middletown, O.

#### SHEETS, BRASS, BRONZE AND COPPER.

(See Brass Sheets, Bronze Sheets and Copper Sheets.)

#### SHEETS, COPPERED STEEL.

Hy—C O P—Canton Sheet Metal Co., Canton, Ohio.  
 Newport Rolling Mill Co., Newport, Ky.  
 ♦Wellsville, Polished—American Sheet & Tin Plate  
 Co., Pittsburgh, Pa.  
 ♦Youngstown Copperoid Steel—Youngstown Sheet &  
 Tube Co., Youngstown, O.

**SHEETS, CUPRO-NICKLE.**

Stamford Rolling Mills Co., New York, N. Y.

**SHEETS, CORRUGATED.**

Newport Rolling Mill Co., Newport, Ky.  
Toncan—United Alloy Steel Corp., (Stark Div.), Canton, O.

**SHEETS, ELECTRICAL STEEL.**

Toncan—United Alloy Steel Corp., (Stark Div.), Canton, O.

**SHEETS, IRON AND STEEL, BLACK.**

- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- ◆ Crescent—Wheeling Corrugating Co., Wheeling, W. Va.
- ◆ Globe—Globe Iron Roofing & Corrugating Co., Cincinnati, Ohio.
- ◆ La Belle Iron Works, Steubenville, O.
- ◆ Mobile Steel Co., Mobile, Ala.
- ◆ Newport Rolling Mill Co., Newport, Ky.
- ◆ Republic Iron & Steel Co., Youngstown, O.
- ◆ Ryerson, Joseph T. & Son, Chicago, Ill.
- ◆ Stark Rolling Mill Co., The, Canton, O.
- ◆ Swedish Iron & Steel Corp., New York, N. Y.
- ◆ Toncan—United Alloy Steel Corp., (Stark Div.), Canton, O.
- ◆ Wheeling Steel Products Co., Wheeling, W. Va.
- ◆ Worth Brothers Co., Philadelphia, Pa.
- ◆ Youngstown—Youngstown Sheet & Tube Co., The, Youngstown, O.

**SHEETS, IRON, BLUE ANNEALED.**

- ◆ La Belle Iron Works, Steubenville, O.
- ◆ Newport Rolling Mill Co., Newport, Ky.
- ◆ Portsmouth—Portsmouth Steel Co., Portsmouth, O.
- ◆ Republic Iron & Steel Co., Youngstown, O.
- ◆ Toncan Metal—The Stark Rolling Mill Co., Canton, O.
- ◆ Youngstown—The Youngstown Sheet & Tube Co., Youngstown, O.

**SHEETS, IRON AND STEEL, GALVANIZED.**

- Armco—American Rolling Mill Co., Middletown, O.
- ◆ American Tin & Terne Plate Co., Philadelphia, Pa.
- ◆ Alan Wood Iron & Steel Co., Philadelphia, Pa.
- ◆ Apollo—American Sheet & Tin Plate Co., Pittsburgh, Pa.
- ◆ Crescent—Wheeling Corrugating Co., Wheeling, W. Va.
- ◆ De Forest Sheet & Tin Plate Co., Niles, O.
- ◆ De Milt Co., H. R., New York, N. Y.
- ◆ Evans Welsh Kote—Mobile Steel Co., Mobile, Ala.
- ◆ Federal Tool & Alloy Steel Corp., Brooklyn, N. Y.
- ◆ Globe—Globe Iron Roofing & Corrugating Co., Cincinnati, Ohio.
- ◆ La Belle Iron Works, Steubenville, O.
- ◆ Lyonor—Lyon, Conglin & Co., Inc., Baltimore, Md.
- ◆ Newport Rolling Mill Co., Newport, Ky.
- ◆ New Process—Youngstown Sheet & Tube Co., The, Youngstown, O.
- ◆ Republic Iron & Steel Co., Youngstown, O.
- ◆ Ryerson, Joseph T. & Son, Chicago, Ill.
- ◆ Toncan—United Alloy Steel Corp., (Stark Div.), Canton, O.
- ◆ Wheeling Steel Products Co., Wheeling, W. Va.
- ◆ Youngstown—The Youngstown Sheet & Tube Co., Youngstown, O.

**SHEETS, ROOFING.**

(See "Roofing, Tin and Terne.")

**SHEETS, TINNED, COPPER.**

Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.

**SHEETS, YELLOW METAL.**

(See "Metal, Yellow.")

**SHELF AND BRACKET, SINK PUMP.**

- ◆ American Foundry & Mfg. Co., St. Louis, Mo.
- ◆ Barnes—The Barnes Mfg. Co., Mansfield, O.

**SHELLS, BRASS AND COPPER, SEAMLESS.**

National Metal Spinning & Stamping Co., New York  
Randolph-Clowes Co., The, Waterbury, Conn.

**SHELLS, FEED, FOR AUTOMATIC SCREW MACHINE.**

Lubenow Mfg. Co., Milwaukee, Wis.

**SHELLS, TANK.**

Columbiana Boiler Co., Columbiana, Ohio.

**SHELVES, BATHROOM, WHITE.**

American Beauty—Bay Ridge Specialty Co., Inc., Trenton, N. J.  
Easy Set—Balmer, J. H., Co., Passaic, N. J.

**SHELVES, EXPANSION TANK.**

Quickset—Frederick A. Taylor, Albany, N. Y.

**SHELVES, GLASS.**

American Brass Novelty Co., Grand Haven, Mich.  
Art Brass Co., New York, N. Y.  
Bay Ridge Specialty Co., Inc., Trenton, N. J.  
Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
Central Specialty Mfg. Co., Chicago, Ill.  
◆ Doerre—Doerre Glass Co., Vineland, N. J.  
Easy Set—Balmer, J. H., Co., Passaic, N. J.  
Galard Co., The, Newark, N. J.  
Garrison Brass & Machine Works, New York.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Mott Iron Works, The J. L., Trenton, N. J.  
Nurre Mirror Plate Co., The, Bloomington, Ind.  
Searis Mfg. Co., Newark, N. J.  
Silver & Co., Brooklyn, N. Y.  
Smith Mfg. Co., E. C., Chicago, Ill.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

**SHELVES, OPAL.**

Easy Set—Balmer, J. H., Co., Passaic, N. J.  
Russell, John M., Mfg. Co., Inc., Naugatuck, Conn.

**SHELVES, TOWEL.**

(See also "Fittings, Bath Room.")

Acme Specialty Mfg. Co., The, Toledo, O.  
Bay Ridge Specialty Co., Inc., Trenton, N. J.  
Easy Set—Balmer, J. H., Co., Passaic, N. J.  
Galard Co., The, Newark, N. J.  
Mott Iron Works, The J. L., Trenton, N. J.  
Peck Bros. & Co., The, New Haven, Conn.  
S. M. Co.—Searis Mfg. Co., Newark, N. J.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.

**SHELVING, STEEL, SHOP AND WAREHOUSE.**

Amco—Art Metal Construction Co., Inc., Jamestown, N. Y.  
Anywhere—Hart & Cooley Co., Inc., New Britain, Conn.  
Aurora—Steel Products Co., Aurora, Ill.  
Barshal Co., Inc., The, Cleveland, O.  
Berloy—Berger Mfg. Co., Canton, O.  
Bernstein Mfg. Co., Philadelphia, Pa.  
Canton Art Metal Co., Canton, O.  
Cleveland Wire Spring Co., Cleveland, O.  
Dexter Metal Mfg. Co., Camden, N. J.  
Durand Steel Locker Co., Chicago, Ill.  
Efficco—Hirschman, W. F., Co., Inc., Buffalo, N. Y.  
Federal—Federal Steel Fixture Co., Chicago, Ill.  
C. C. Fouts Co., The, Middletown, O.  
H. H.—Hart & Hutchinson Co., New Britain, Conn.  
Jafferis—Richard W. Jafferis Co., Camden, N. J.  
Kidde & Co., New York, N. Y.  
Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
Manufacturing Equipment & Engineering Co., Framingham, Mass.  
Medart, Fred, Mfg. Co., St. Louis, Mo.  
National Adjustable—National Scale Co., Chicopee Falls, Mass.  
National—National Scale Co., New York.  
New Britain Machine Co., New Britain, Conn.  
Ohio Mfg. Co., Painesville, O.  
Terrell's—Terrell's Equipment Co., Grand Rapids, Mich.  
Trio Mfg. Co., Cleveland, O.

**SHIELDS, RADIATOR AND REGISTER.**

Acme—Acme Radiator Shield Co., Chicago, Ill.  
Acme—W. H. Johnson & Son Co., Indianapolis, Ind.  
Armstrong—Thomas & Armstrong Co., Dayton, O.  
Capitol Triton—U. S. Radiator Corp., Detroit, Mich.  
Dixon—Monash-Younger Co., Chicago, Ill.  
Favorite—The Peck-Williamson Heating & Ventilating Co., Cincinnati, O.  
Foster Sheet Metal Co., Springfield, Ill.  
Hawkins—W. W. McCain, Indianapolis, Ind.  
Ideal—American Radiator Co., Chicago, Ill.  
Illinois Combination—Illinois Flower Box Co., Chicago, Ill.  
Kauffman Engineering Co., St. Louis, Mo.  
Kirk & Blum Mfg. Co., Cincinnati, O.  
Monash—Monash-Younger Co., Chicago, Ill.  
National—National Radiator Co., Johnstown, O.  
Perfect—Decatur Cornice & Roofing Co., Decatur, Ill.  
Prentice, L. H. & Co., Chicago, Ill.  
Ringin—Sodemann Heat & Power Co., St. Louis, Mo.  
Royal—National Stove Co., Lorain, O.  
Royal—U. S. Radiator Corp., Detroit, Mich.  
Schueler Ventilator Co., Eureka, Ill.  
Shapco—Sodemann Heat & Power Co., St. Louis, Mo.  
Star—Monash-Younger Co., Chicago, Ill.  
Trico—Art Metal Radiator Co., Chicago, Ill.

**SHIFTERS, BELT.**

(See also "Countershafts.")

Artisan Mfg. Co., Lockland, Ohio.  
Barry—Barry Co., Muscatine, Iowa.

- Builders Iron Foundry Co., Providence, R. I.  
 Carlson Machine Co., Inc., Syracuse, N. Y.  
 Chain Belt Co., Milwaukee, Wis.  
 ♦ Chicago—Chicago Pulley & Shafting Co., Chicago, Ill.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Good Active—Nils E. Larson, Chicago, Ill.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Hagan, L. T., Winchester, Ky.  
 Heavy-Sim-Plex—Mossberg Wrench Co., Providence, R. I.  
 Imperial—Imperial Co., Grove City, Pa.  
 K-C—Kremer-Cummins Machine Co., The, Cleveland, Ohio.  
 Le Blond—R. K. Le Blond Machine Tool Co., Cincinnati, O.  
 ♦ Mason—Mason Regulator Co., Boston, Mass.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Naylor Bros., Peekskill, N. Y.  
 Prescott Co., The, Menominee, Mich.  
 Simplex, Sim-Pull, Heavy Sim Plex—Rhode Island Warp Stop Equipment Co., Pawtucket, R. I.  
 ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

**SHIMS, LAMINATED, BRASS AND COPPER.**

- Dallas Brass & Copper Co., Chicago, Ill.  
 Gasket Supply Co., Philadelphia, Pa.  
 Laminum—Laminated Shim Co., Inc., Long Island City, N. Y.  
 Victor Manufacturing & Gasket Co., Chicago, Ill. (also stock).

**SHIMS, LEATHER.**

- Leather Parts Co., Indianapolis, Ind.

**SHOES, DRIVE.**

- Larkin Packer Co., Bartlesville, Okla.

**SHOES, LADDER, SAFETY.**

- Cork Grip—Safety Service Engineering Co., Cleveland, O.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Queen—Harker Mfg. Co., Cincinnati, O.

**SHOES, FILE, FOR TIMBER.**

- Canton Foundry & Machine Co., The, Canton, O.  
 Janney, Steinmetz & Co., Philadelphia, Pa.

**SHOES, PIPE.**

- St. Louis Malleable Casting Co., St. Louis, Mo.

**SHOES, SHAFT HANGER.**

- ♦ Woods, T. B., Sons Co., Chambersburg, Pa.

**SHOES, WORKMEN'S PROTECTIVE.**

- Safety First Shoe Co., Providence, R. I.  
 Smith, R. P. & Sons Co., Chicago, Ill.

**SHOT, GRIT, AND IRON SAND.**

- Diamond—Harrison Bros., Inc., Amesbury, Mass.  
 Globe—Globe Steel Co., The, Mansfield, O.  
 Pittsburgh Crushed Steel Co., Pittsburgh, Pa.

**SHOVELS AND FORKS, CONCRETE.**

- Conneaut—Conneaut Shovel Co., Conneaut, Ohio.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Sackett, H. B., Screen & Chute Co., Chicago, Ill.

**SHOVELS, GASOLINE AND ELECTRIC.**

- Browning, Victor R., Cleveland, O.  
 Marion Steam Shovel Co., Marion, O.

**SHOVELS, MINING, RAILROAD AND FERTILIZER.**

- Thew—The Thew Shovel Co., Lorain, O.  
 Marion Steam Shovel Co., Marion, O.

**SHOVELS, POWER, FOR GRAIN, SAND, ETC.**

- Link-Belt Company, Chicago and Philadelphia.

**SHOVELS, POWER, FOR UNLOADING CARS.**

- S-A—Stephens-Adamson Mfg. Co., Aurora, Ill.  
 Link-Belt Company, Chicago and Philadelphia.

**SHOVELS, SCOOPS AND SPADES.**

- Ames Shovel & Tool Co., Boston, Mass.  
 Baldwin Tool Works, Parkersburg, W. Va. (Trade names—Baldwin's Dollar, Baldwin's Monongah, Featherweight, Baldwin's Know All, Baldwin's Luther Burbank, Baldwin's Optimus, Baldwin's Pinnacle, Baldwin's Semper, Baldwin's Vanadium.)  
 Beall Bros., Alton, Ill.  
 Conneaut Shovel Co., The, Conneaut, Ohio. (special shovels only).  
 Defender, Eclipse, Extra—Fairbanks, Morse & Co., Chicago, Ill.  
 Elm—The Fairbanks Co., New York, N. Y.

- Estes, E. B. & Sons, New York, N. Y.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Giant—Pfeiffer, John & Co., Philadelphia, Pa.  
 Hill & Griffith Co., Cincinnati, O.  
 Hubbard & Co., Pittsburgh, Pa.  
 Juniata, Monarch, Portage, Star, Vulcan—Union Furnace Mfg. Co., Union Furnace, Pa.  
 Kohler, F. E. & Co., Canton, O.  
 Osborn Mfg. Co., Cleveland, O.  
 Pittsburgh Shovel Co., The, Pittsburgh, Pa. (Armstrong, Coal Bluff, Kiski, Leachburg, Pacemaker, Shuster, Walker, Crucible, L. V. Walsh).  
 Special, Victor—Fairbanks, Morse & Co., Chicago, Ill.  
 Topping Bros., New York, N. Y.  
 Wood Shovel & Tool Co., Piqua, O. (mining only).  
 ♦ Wyoming Red Edge—Wyoming Shovel Works, The, Wyoming, Pa.  
 Yankeetoothed—B. B. Neal Hardware Co., Inc., New York, N. Y.

**SHOVELS, STEAM.**

- Allis-Chalmers Co., Milwaukee, Wis.  
 American—American Clay Machy Co., Bucyrus, O.  
 American Locomotive Co., New York, N. Y.  
 Atlantic Steel Dredge Co., Ft. Wayne, Ind.  
 Browning—Browning-Sommer-Adams Co., Cleveland, O.  
 Carlin's Sons Co., Thos., Pittsburgh, Pa.  
 Conard, Thos. P., Philadelphia, Pa.  
 Fairbanks Steam Shovel Co., Marion, O.  
 Heyworth, Jas. O., Chicago, Ill.  
 Hunt Co., C. W., New York, N. Y.  
 Industrial Supply Co., Keokuk, Iowa.  
 Keystone—Keystone Driller Co., Beaver Falls, Pa.  
 Marion Steam Shovel Co., Marion, O.  
 Monaghan Machine Co., Chicago, Ill.  
 Osgood '18'—The Osgood Co., Marion, O.  
 Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Thew Shovel Co., Lorain, O.  
 Toledo Foundry & Machine Co., Toledo, O.  
 Vulcan Steam Shovel Works, Toledo, O.

**SHRINKERS, TIRE.**

(See "Machines, Tire Upsetting.")

- Buffalo Forge Co., Buffalo, N. Y.  
 Keatley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Mole—American Scale Co., Kansas City, Mo.  
 Potts, D. H., Co., Lancaster, Pa.  
 Southern Skein & Foundry Co., Chattanooga, Tenn.  
 West—The West Tire Setter Co., Rochester, N. Y.

**SHUTTERS, STEEL ROLLING.**

- Ogden, J. Edward, Co., New York, N. Y.  
 Smith Elevator Co., Inc., Buffalo, N. Y.

**SKUTOFFS, GAGE GLASS, AUTOMATIC.**

- Breakey—L. I. Breakey, Marshall, Mich.

**SIVES AND BOLTING CLOTH.**

- Miller Wire Cloth Co., Worcester, Mass.  
 Newark Wire Cloth Co., Newark, N. J.

**SIEVES, TESTING**

- Tyler, W. S. Co., Cleveland, O.

**SIFTERS, SAND.**

- Arcade Mfg. Co., Freeport, Ill.  
 Battle Creek—Battle Creek Sand Sifter Co., Battle Creek, Mich.  
 Beach-Russ—Beach Russ Co., New York, N. Y.  
 Hanna—Hanna Engineering Wks., Chicago, Ill.  
 Hill & Griffith Co., Cincinnati, O.  
 Obermayer, S., Co., Cincinnati, O.  
 Paxson, J. W., Co., Philadelphia, Pa.  
 Sandhog—Vibrating Machinery Co., Chicago, Ill. (Electric, for any materials.)  
 Whiting Foundry Equipment Co., Harvey, Ill.  
 Worthington Pump & Machinery Corp., New York, N. Y. (Steam, pneumatic or electric).

**SIGHT FEEDS, OIL, INDEPENDENT.**

- Essex Brass Corp., Detroit, Mich.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 ♦ Warrior—D. T. Williams Valve Co., Cincinnati, O.

**SIGNALS, FIRE ALARM.**

- Reiter, G. C., Canton, O.  
 Union Water Meter Co., Worcester, Mass.

**SIGNALS AND CALLING SYSTEMS, INDUSTRIAL.**

- Cincinnati Time Recorder Co., Cincinnati, O.  
 Holtzer—Cabot Electric Co., Roxbury, Boston, Mass.  
 Klaxon, Klaxocator—Klaxon Co., Newark, N. J.  
 National Scale Co., Chicopee Falls, Mass.  
 Reiter, G. C., Canton, O.  
 Sterling—Interstate Machine Products Co., Inc., Rochester, N. Y.

**SIGNALS, SPEAKING TUBE, MINE.**

American Safety Lamp & Mine Supply Co., Scranton, Pa.

**SIGNS, BRASS AND BRONZE.**

Fries & Co., Buffalo, N. Y.  
Leonard Engraving Works, Chicago, Ill.  
Matthews & Co., Jas. H., Pittsburgh, Pa.  
Newman Mfg. Co., Cincinnati, O.  
Smith, E. P., Wire & Iron Works, Chicago, Ill.

**SIGNS, DANGER.**

Behringer, Edward A., New York, N. Y.  
Hardy, F. A., & Co., Chicago, Ill.  
Ingram-Richardson Mfg. Co., Beaver Falls, Pa.  
La France—American La France Fire Engine Co., Elmira, N. Y.  
Matthews & Co., Jas. H., Pittsburgh, Pa.  
Mine Safety Appliance Co., Pittsburgh, Pa.  
Ready-Made Sign Co., New York, N. Y.  
Safety Equipment Service Co., The, Cleveland, O.  
Shannon—J. J. Shannon & Co., Philadelphia, Pa.  
Stonehouse Standard Stock Signs—Stonehouse Steel Sign Co., Denver, Colo.

**SIGNS, ELECTRIC.**

Federal—Federal Electric Co., Chicago, Ill.

**SILVER, BAR AND SHEET.**

American Smelting & Refining Co., New York, N. Y.  
Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.

**SINK AND BATH COMBINED.**

Spacesaver—Space Saving Appliance Co., New York, N. Y.

**SINK AND LAUNDRY TRAY COMBINED.**

Furlong, Thos. N., San Francisco, Cal.  
Kohler—Kohler Co., Kohler, Wis.

**SINK AND LAVATORY COMBINED.**

Utilis—The J. L. Mott Iron Works, Trenton, N. J.

**SINKS, ARTIFICIAL STONE, CEMENT AND CONCRETE.**

Acme Granolithic Co., Boston, Mass.  
Ajax—Chicago Granite Mfg. Co., Chicago, Ill.  
Atlas Wash Tray Co., New Haven, Conn.  
Furlong, Thos. N., San Francisco, Cal.  
Princess—Chicago Granite Mfg. Co., Chicago, Ill.  
Sanitary Cement Co., Everett, Mass.  
Slater—G. W. Slater & Son, San Francisco, Cal.  
Wesely—Chas. Wesely Co., Chicago, Ill.

**SINKS, CAST IRON, PLAIN AND GALVANIZED.**

American Foundry & Mfg. Co., St. Louis, Mo.  
American Steel Barrel Co., Brooklyn, N. Y.  
Atlantic—Portland Stove Foundry Co., Portland, Me.  
Barber Mfg. Co., The, Ashtabula, O.  
Barnes Mfg. Co., The, Mansfield, O.  
Bignall Co., The, Medina, N. Y.  
Clark Co., Henry N., Boston, Mass.  
Clover Leaf—Portland Stove & Foundry Co., Portland, Me.  
Crame Co., Chicago, Ill.  
Demerest—Central Foundry Co., New York, N. Y.  
Fleck Bros. Co., Philadelphia, Pa.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Hercules Iron & Supply Co., Boston, Mass.  
Humphries Mfg. Co., The, Mansfield, O.  
Illinois Malleable Iron Co., Chicago, Ill.  
Iowa Mfg. Co., Oskaloosa, Ia.  
Johnson, J. D., Co., Philadelphia, Pa.  
McCambridge Co., Philadelphia, Pa.  
Mott, J. L., Iron Works, Trenton, N. J.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Olmstead, A. E., & Sons, Putnam, N. Y.  
Rumsey Pump Co., Limited, Seneca Falls, N. Y.  
Salem Brass & Iron Mfg. Co., Salem, N. J.  
Sanitary Company of America, Linfield, Pa.  
Swett, A. L., Iron Works, Medina, N. Y.  
Treaty Co., The, Greenville, Ohio.  
Wolf Mfg. Co., Chicago, Ill.

**SINKS, COPPER, GERMAN SILVER AND WHITE METAL.**

Badger's, E. B., Sons Co., Boston, Mass.  
Blessing, C. A., Philadelphia, Pa.  
Albuc—Burk, Alan R. H., Mfg. Co., Philadelphia, Pa.  
Clow's—James B. Clow & Sons, Chicago, Ill.  
Eichman, J. C., Mfg. Co., Baltimore, Md.  
Elkay Mfg. Co., Chicago, Ill.  
Jenkins Mfg. Co., New York, N. Y.  
Pelham, Plymouth, Putnam, Putnam, Dreadnaught, Winchester—J. L. Mott Iron Works, Trenton, N. J.  
Trageser Steam Copper Works, John, New York, N. Y.

**SINKS, EARTHENWARE.**

Graham Chemical Pottery Works, Chas., Brooklyn, N. Y.  
Sanitary Co. of America, Linfield, Pa.  
Swett Iron Works, A. L., Medina, N. Y.

**SINKS, FACTORY, WASH.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Barnett—The J. L. Mott Iron Works, Trenton, N. J.  
Cleveland Blow Pipe & Mfg. Co., Cleveland, O.  
Crame Co., Chicago, Ill.  
Dubois—F. N. Dubois & Co., New York, N. Y.  
Ebinger—D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
Euclid Stone & Brick Co., Cleveland, O.  
Factoro—The J. L. Mott Iron Works, Trenton, N. J.  
Federal-Huber Co., Chicago, Ill.  
Goodrich, Illinois, Indiana—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Humphries Mfg. Co., Mansfield, O.  
Kohler Co., Kohler, Mich.  
Koven, L. O., & Bro., Jersey City, N. J.  
Manufacturing Equipment & Eng. Co., Boston, Mass.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Rundle Mfg. Co., Milwaukee, Wis.  
Speakman—Speakman Co., Wilmington, Del.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Tepeco—Trenton Potteries Co., Trenton, N. J.  
Union Sanitary Works, Noblesville, Ind.  
Utility—The J. L. Mott Iron Works, Trenton, N. J.  
Wolf Mfg. Co., Chicago, Ill.

**SINKS, HOSPITAL.**

Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
Crame Co., Chicago, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Humphries Mfg. Co., The, Mansfield, O.  
J. B. Clow & Sons Co., Chicago, Ill.  
Thos. Maddock's Sons Co., Trenton, N. J. (Trade names: Madavian, Madiator, Madagon, Madae, Madwin.)  
Monument Pottery Co., Trenton, N. J.  
Mott Iron Works, J. L., Trenton, N. J.  
Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Rundle-Spence, Mfg. Co., Milwaukee, Wis.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Trenton Potteries Co., Trenton, N. J.  
Wolf Mfg. Co., Chicago, Ill.

**SINKS, PANTRY.**

Albuc—Burk, Alan R. H., Mfg. Co., Philadelphia, Pa.  
Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
Badger, E. B., & Sons Co., Boston, Mass. (copper and German silver)  
Beekman, Brunswick—The J. L. Mott Iron Works, Trenton, N. J.  
Camden Pottery Co., Camden, N. J.  
Concord Woodworking Co., Concord, N. H.  
Economic—The J. L. Mott Iron Works, Trenton, N. J.  
Elkay Mfg. Co., Chicago, Ill. (copper).  
Eureka—Cochran, Drugan & Co., Trenton, N. J.  
Federal-Huber Co., Chicago, Ill.  
Graham Chemical Pottery Works, Chas., Brooklyn, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Litterer Bros. Mfg. Co., Chicago, Ill.  
Madasink—Thos. Maddock's Sons Co., Trenton, N. J.  
Pelham, Pennington—The J. L. Mott Iron Works, Trenton, N. J.  
Perfection—American Porcelain Co., New Brighton, Pennsylvania.  
Philadelphia Sheet Metal & Wood Works, The, Philadelphia, Pa. (copper and silver).  
Pierrepont, Plymouth, Proctor, Putnam—The J. L. Mott Iron Works, Trenton, N. J.  
Porpan—Thos. Maddock's & Sons Co., Trenton, N. J.  
Puritan—J. L. Mott Iron Works, Trenton, N. J.  
Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Sands, A. B., & Son Co., New York, N. Y.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Sesco—The Sanitary Earthenware Specialty Co., Trenton, N. J.  
Tennessee—The Cahill Iron Works, Chattanooga, Tenn.  
Trageser, John, Steam Copper Works, New York, N. Y.  
Winchester—The J. L. Mott Iron Works, Trenton, N. J.

**SINKS, PETRIUM.**

Petrium Sanitary Sink Co., Berkeley, Cal.

**SINKS, PORCELAIN AND VITREOUS CHINA.**

American—McCambridge Co., Philadelphia, Pa.  
Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
Camden Pottery Co., Camden, N. J.  
Clow—James B. Clow & Sons, Chicago, Ill.  
Continental—The Trenton Potteries Co., Trenton, N. J.  
Crame Co., Chicago, Ill. (Trade names: Beverly, Chateau, Cottage, Essex, Manor, Surrey, Touraine, Villa.)



Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Eljer Co., Cameron, W. Va. Trade names, Chemical Sink, Domestic Science, Slop.  
 Eureka—Cochran, Drugan & Co., Trenton, N. J.  
 Federal-Huber Co., Chicago, Ill.  
 Ford's Porcelain Works, Perth Amboy, N. J.  
 German-American Stoneware Works, New York, N. Y.  
 Graham Chemical Pottery Works, Chas., Brooklyn.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 Integral, Kent, Kitchnet—Crane Co., Chicago, Ill.  
 Maddock's, Thos. & Sons Co., Trenton, N. J. (Trade names—Porsink, Pordrain, Porpan.)  
 McCambridge Co., Philadelphia, Pa.  
 Modern—Monument Pottery Co., Trenton, N. J.  
 Monarch—Wolff Mfg. Co., Chicago, Ill.  
 Mott, J. L., Iron Works, Trenton, N. J. Trade names—Barrington, Haddon, Rocona, Allston, Ashland, St. Regis, Dover.  
 Pacific Sanitary Mfg. Co., San Francisco, Cal.  
 Perfection—American Porcelain Co., New Brighton, Pa.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.

**SINKS, PORCELAIN ENAMELED.**

American Enamel Mfg. Corp., Elizabeth, N. J.  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Beekman, Belgrade, Burnside—The J. L. Mott Iron Works, Trenton, N. J.  
 Bryant—The Peck Bros. & Co., New Haven, Conn.  
 Cobaltum—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Crane Co., Chicago, Ill.  
 Crown—Wolff Mfg. Co., Chicago, Ill.  
 Day-Ward Co., The, Warren, O. (roll rim).  
 Federal-Huber Co., Chicago, Ill.  
 Du Bois, F. N. & Co., The, Inc., New York, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 James B. Clow & Sons, Chicago, Ill.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler—Kohler Co., Kohler, Wis.  
 Liberty—The Humphries Mfg. Co., Mansfield, O.  
 Lipp, Louis Co., Cincinnati, O.  
 National Sanitary Company, The, Salem, O.  
 Nelson, N. O. Mfg. Co., St. Louis, Mo.  
 Rialto—Wolff Mfg. Co., Chicago, Ill.  
 Richmond Radiator Co., New York.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 The Help-her—Improved Sanitary Fixture Co., Los Angeles, Cal. (with waste separator).  
 Virginia—Union Sanitary Mfg. Co., Noblesville, Ind.  
 Weiskittel & Son, A., Baltimore, Md.  
 Wilfur—United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Wolff's—Wolff Mfg. Co., Chicago, Ill.

**SINKS, SOULLERY OR VEGETABLE.**

Elkay Mfg. Co., Chicago, Ill.  
 Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Litterer Bros. Mfg. Co., Chicago, Ill.  
 Muir—The J. L. Mott Iron Works, Trenton, N. J.  
 Porable—Thos. Maddock's Sons Co., Trenton, N. J.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.

**SINKS, SLATE.**

Alpha Slate Mfg. Co., The, Bangor, Pa.  
 Bangor Structural Slate Co., Bangor, Pa.  
 Butler & Son Co., Philip H., Somerville, Mass.  
 Clow—James B. Clow & Sons, Chicago, Ill.  
 East Bangor Consolidated Slate Co., The, East Bangor, Pa.  
 Fair Haven Marble & Marbleized Slate Co., Fair Haven, Vt.  
 Federal-Huber Co., Chicago, Ill.  
 Fleming Slate Co., Poultney, Vt.  
 Hower, J. K., Slatington, Pa.  
 Keenan Structural Slate Co., Bangor, Pa.  
 Lobb, Parry & Co., Danielsville, Pa.  
 McConnell Slate Co., Brooklyn, N. Y.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Pennsylvania Structural Slate Co., Easton, Pa.  
 Penrhyn Slate Co., The, Middle Granville, N. Y.  
 Union Soapstone Co., Boston, Mass.  
 Woodley—Woodley Slate Co., Bangor, Pa.

**SINKS, SLOP.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Astoria, Atlanta—The J. L. Mott Iron Works, Trenton, N. J.  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Barnes Mfg. Co., The, Mansfield, O.  
 Bignall Co., The, Medina, N. Y.  
 Casey-Hedges Co., Chattanooga, Tenn.  
 Clark Co., Henry N., Boston, Mass.

Clinic—Haines, Jones & Cadbury Co., Philadelphia.  
 Continental—The Trenton Potteries Co., Trenton, N. J.  
 Day-Ward Co., The, Warren, O.  
 Eljer—Eljer Co., Cameron, W. Va. (siphon jet).  
 Eureka—Cochran, Drugan & Co., Trenton, N. J.  
 Federal-Huber Co., Chicago, Ill.  
 Foran Foundry & Mfg. Co., Flemington, N. J.  
 German-American Stoneware Works, New York, N. Y.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Graham Chemical Pottery Works, Chas., Brooklyn.  
 Grammercy—The Peck Bros. & Co., New Haven, Conn.  
 Hajoca—Haines, Jones, Cadbury Co., Philadelphia, Pa.  
 Hanover—The J. L. Mott Iron Works, Trenton, N. J.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 James B. Clow & Sons, Chicago, Ill.  
 Johnson, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Kohler Superior—Kohler Co., Kohler, Wis.  
 Kuperle Foundry Co., John C., St. Louis, Mo.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Maddock's Sons Co., Thos., Trenton, N. J. Trade Names: Madagon, Madiator, Madwin, Madrone.  
 Melbourne—The Peck Bros. & Co., New Haven, Conn.  
 Model—The Meyer-Sliffen Co., New York, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 Monarch, Wolff's—Wolff Mfg. Co., Chicago, Ill.  
 Monument Pottery Co., Trenton, N. J.  
 Naturita—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Raleigh, Ralston, Randolph—The J. L. Mott Iron Works, Trenton, N. J.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Rexmore, Richmond, Roanoke—The J. L. Mott Iron Works, Trenton, N. J.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Salem Brass & Iron Mfg. Co., Bridgeton, N. J.  
 Sanitary Company of America, Linfield, Pa.  
 Sanitas Mfg. Co., Boston, Mass.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Swett Iron Works, A. L., Medina, N. Y.  
 Tepeco & Two Fired—Trenton Potteries Co., Trenton, N. J.  
 Touro—The J. L. Mott Iron Works, Trenton, N. J.  
 Treaty Co., The, Greenville, Ohio.  
 United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Weiskittel & Son, A., Baltimore, Md.

**SINKS, STEEL.**

Cleveland Blow Pipe Mfg. Co., Cleveland, O.  
 Diamond—L. Wolff Mfg. Co., Chicago, Ill.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Lalance & Grosjean Mfg. Co., New York City.  
 Nesco—National Enameling & Stamping Co., Inc., New York.  
 Riverside Boiler Works, Inc., Cambridge, Mass.

**SINKS, STERILIZING.**

Litterer Bros. Mfg. Co., Chicago, Ill.

**SINKS, STONE.**

Alberene Stone Co., Chicago and New York.  
 Butler & Son Co., Philip H., Somerville, Mass.  
 Chemical—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Diamond—Robinson Stoneware Co., Brooklyn, N. Y.  
 Euclid Mfg. Co., Paden City, W. Va.  
 Euclid Stone & Brick Co., Cleveland, O. (Trade names—Genuine Euclid Stone, Lakewood, Glas-Rox, Cuyahoga.)  
 Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Union Soapstone Co., Boston, Mass.

**SINKS, VITREOUS CHINA.**

Capoco—Camden Potteries Co., Camden, N. J.  
 Eljer Co., Cameron, W. Va.  
 Maddock's Sons Co., Thomas, Trenton, N. J.  
 SESCO—The Sanitary Earthenware Specialty Co., Trenton, N. J.  
 Trenton Potteries Co., Trenton, N. J.  
 Vitreo—Monument Pottery Co., Trenton, N. J.  
 Wheeling Sanitary Manufacturing Co., Wheeling, W. Va.

**SINKS, WOODEN.**

Eagle Tank Co., Chicago, Ill.  
 Petrium—Petrium Sanitary Sink Co., Berkeley, Cal.  
 Wendnagel & Co., Chicago, Ill.

**SIPHONS AND LIFTS, ACID.**

Koerting—Schutte & Koerting Co., Philadelphia.  
 Pyrene—Pyrene Mfg. Co., New York, N. Y.

**SIPHONS, AUTOMATIC SEWAGE.**

Priestman-Beddoes—Albert Priestman, Philadelphia, Pa.

**SIPHONS, BILGE.**

Braender—Phillip Braender, New York.

**SIPHONS, CLOSET TANK.**

(See "Valves, Water Closet Flush Tank.")  
Jones Hollow Ware Co., Baltimore, Md.

**SIPHONS, OUP AND TANK, HEATING.  
FOR GAS WORKS.**

Koerting Universal—Schutte & Koerting Co., Philadelphia, Pa.

**SIPHONS, SEWER FLUSHING.**

De La Hunt—De La Hunt Flush Tank Co., Cedar Rapids, Ia.

Miller—Modern Iron Works, Quincy, Ill.  
Pacific Flush Tank Co., Chicago, Ill. Trade Names—  
Miller, Miller-Potter, Rhodes-William.

**SIPHONS, STEAM GAGE.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- American Pipe Bending Co., Elizabethtown, Pa.
- Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.
- Crane Co., Chicago, Ill.
- Crosby Steam Gage & Valve Co., Boston, Mass.
- William Supply Co., Philadelphia, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kleinman, Russell F., Philadelphia, Pa.
- Koerting Universal—Schutte & Koerting Co., Philadelphia, Pa.
- Lonergan, J. E., Co., Philadelphia, Pa.
- McDowell, Small, McKibben Co., Camden, N. J.
- National Steam Specialty Co., Chicago, Ill.
- N. T. C.—National Tube Co., Pittsburgh, Pa.
- Ohio—The Ohio Injector Co., Wadsworth, O.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.
- Star—Star Brass Mfg. Co., Boston, Mass.
- United States Gauge Co., New York, N. Y.
- ◆ Walworth Mfg. Co., Boston, Mass.
- Watson, N. A., Erie, Pa.

**SIPHONS, STEAM JET.**

(See also "Ejectors.")

Koerting—Schutte & Koerting Co., Philadelphia.

**SIRENS, ELECTRIC.**

Federal—Federal Electric Co., Chicago, Ill.  
Sterling—Interstate Machine Products Co., Inc., Rochester, N. Y.

**SKELP.**

- Brooks, E. & G., Iron Co., Birdsboro, Pa.
- Cohoes Rolling Mill Co., Cohoes, N. Y.
- Glasgow Iron Co., Pottstown, Pa.
- ◆ La Belle Iron Works, Steubenville, O.
- Wheeling Steel Corporation, Wheeling, W. Va.
- ◆ Youngstown Sheet & Tube Co., Youngstown, O.

**SKIDDERS, LOG.**

Lidgerwood Mfg. Co., New York, N. Y.  
Lindsey Wagon Co., Laurel, Miss.

**SKIDS, UNLOADING.**

Boston & Lockport Block Co., Boston, Mass.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lansing Co., Lansing, Mich.  
Standard Conveyor Co., North St. Paul, Minn.  
Zering Mfg. Co., H., Cincinnati, O.

**SKIMMERS, BOILER.**

- Buckeye Boiler Skimmer Co., Toledo, O. (floating).
- National Boiler Specialties Co., Elgin, Ill.
- ◆ Yarrow—Yarnall-Waring Co., Philadelphia, Pa.

**SKIMMERS, HOT METAL.**

American Saw & Tool Works, Chicago, Ill.  
Mullins Body Corp., Stamping Dept. A., Salem, O.

**SKIPS, MINING.**

Biehl Iron Works, Inc., Reading, Pa.  
Jeffrey Mfg. Co., Columbus, Ohio.  
Link-Belt Company, Chicago and Philadelphia.

**SLABS, FLOOR, OR BASES, WATER CLOSET.**

Penn Pottery Co., Philadelphia, Pa.

**SLATE, PLUMBING AND STRUCTURAL.**

Alpha Slate Mfg. Co., Bangor, Pa.  
Bangor Structural Slate Co., Bangor, Pa.  
Butler & Son Co., Phillip H., Boston, Mass.  
Crown Slate Co., Pen Argyle, Pa.  
East Bangor Consolidated Slate Co., East Bangor, Pa.

Fair Haven Marble & Marbleized Slate Co., Fair Haven, Vt.  
Fleming Slate Co., Poultney, Vt.  
Genuine Bangor Slate Co., Easton, Pa.  
Johnson, E. J., New York, N. Y.  
Keenan Structural Slate Co., Bangor, Pa.  
Lobb, Parry & Co., Danielsville, Pa.  
Masters—Excelsior Slate Co., Pen Argyle, Pa.  
McConnell Slate Co., Brooklyn, N. Y.  
Miller Slate Co., O. A., Slatkington, Pa.  
New York Slate Works, The, New York, N. Y.  
Pennsylvania Structural Slate Co., Easton, Pa.  
Phoenix Slate Co., The, Wind Gap, Pa.  
Rutland Marble Mfg. Co., Rutland, Vt.  
Slate Products Co. of America, Bangor, Pa.  
Structural Slate Co., The, Pen Argyle, Pa.  
Tinsman, M. L., & Co., Inc., Pen Argyle, Pa.  
Van Ness Slate Co., Newark, N. J.  
Union Soapstone Co., Boston, Mass.  
Western Slate Co., Chicago, Ill.  
Woodley—Woodley Slate Co., Bangor, Pa.

**SLEDGES, MAULS, OR STRIKING HAMMERS.**

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- Evansville Tool Works, Evansville, Ind.
- Fulton Tool Works, Canal Fulton, O.
- Hardsock, Martin, Co., Pittsburgh, Pa.
- Heller Bros. Co., Newark, N. J.
- Horseshoe—Stanley Rule & Levels Co., Atha Div., New Britain, Conn.
- Hubbard & Co., Pittsburgh, Pa.
- Iron City Star—Iron City Tool Works, Pittsburgh, Pa.
- Klein-Logan Co., Pittsburgh, Pa.
- Lovejoy Tool Works, Chicago, Ill.
- Mack & Co., Rochester, N. Y.
- ◆ Plumb, Fayette R., Inc., Philadelphia, Pa.
- Salem Tool Co., The, Salem, O.
- Union Drop Forge Co., Chicago, Ill.
- Verona Tool Works, Pittsburgh, Pa.
- Warwood Tool Co., Wheeling, W. Va.
- Western Tool & Forge Co., Brackenridge, Pa.
- What Cheer Tool Co., What Cheer, Ia.

**SLEEVES, CLOSET EXTENSION.**

Dehn's Acme—Compound Injector & Specialty Co., Chicago, Ill.

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- ◆ Boston Belting Co., Boston, Mass.
- ◆ Cincinnati Rubber Mfg. Co., The, Cincinnati, O.
- Continental Rubber Works, Erie, Pa.
- Diamond Rubber Corp., The, Akron, O.
- Dominion Asbestos and Rubber Corp., New York.
- Giant—Revere Rubber Co., Boston, Mass.
- Goodrich Co., The B. F., Akron, O.
- Hudson Mechanical Rubber Co., New York, N. Y.
- Maltese Cross—Gutta Percha & Rubber Mfg. Co., New York.
- United States Rubber Co., Chicago, Ill.
- ◆ New Jersey Car Spring & Rubber Co., Jersey City, N. J.
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- ◆ New York Belting & Packing Co., New York, N. Y.
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- Quaker City Rubber Co., Philadelphia, Pa.
- Shawmut—Revere Rubber Co., Boston, Mass.
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- Sphinx—Diamond—Diamond Rubber Co., Inc., Akron, Ohio.
- Tribune Continental—Continental Rubber Works, Erie, Pa.
- ◆ United & Globe Rubber Mfg. Co., Trenton, N. J.
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America—America Heating & Supply Co., Rockford, Ill.

**American—American Fdy. & Mfg. Co., St. Louis, Mo.**  
**Beaton—Beaton & Cadwell Mfg. Co., New Britain, Conn.**

**Crane—Crane Co., Chicago, Ill.**  
**Grabler Universal—Grabler Mfg. Co., Cleveland, O.**  
**Jenkins Mfg. Co., New York, N. Y.**  
**K-M-C—Kellogg-Mackay Co., Chicago, Ill.**  
**Perfection—Illinois Malleable Iron Co., Chicago, Ill.**  
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♦ **Walworth Mfg. Co., Boston, Mass.**

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**Dresser—S. R. Dresser Mfg. Co., Bradford, Pa.**  
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**Hammon Coupler Co., The, Mount Vernon, O.**  
**Prentice, L. H., Co., Chicago, Ill.**

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**Best, Estate of John, Lancaster, Pa.**  
**Biehl Iron Works, Inc., The, Reading, Pa.**  
**Bigelow Co., The, New Haven, Conn.**  
**Biggs Boiler Works Co., Akron, O.**  
**Borger Bros., Columbus, O.**  
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**Casey-Hedges Co., The, Chattanooga, Tenn.**  
**Codd, E. J., Co., Baltimore, Md.**  
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**Columbus Steam Boiler & Heater Co., Columbus, O.**  
**Connerly & Co., Philadelphia, Pa.**  
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**Dillon, D. M., Steam Boiler Wks., Fitchburg, Mass.**  
**Dover Boiler Works, Dover, N. J.**  
**Drake—Williams-Mount Co., Omaha, Neb.**  
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**Hamler Boiler & Tank Co., Chicago, Ill.**  
**Heine Boiler Company, St. Louis, Mo.**

**Hibben & Co., Chicago, Ill.**  
**Hindley & Pendleton Co., The, Brooklyn, N. Y.**  
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**International Boiler Works Co., East Stroudsburg, Pa.**  
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**Littleford Bros., Cincinnati, O.**  
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**Marshall, Wm., Steam Boiler Works, Dubuque, Ia.**  
**McNaull Boiler Mfg. Co., The, Toledo, O.**  
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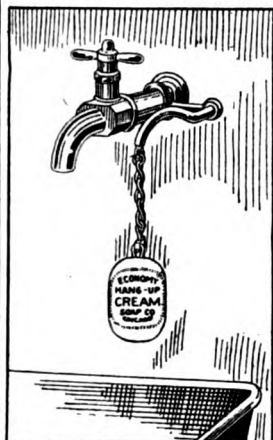
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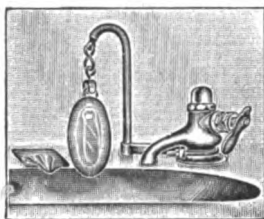
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❖ Universo-Watrous—Imperial Brass Mfg. Co., Chicago, Ill.

World Refining Co., Easton, Pa.

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Catac, Niagara—Swan & Finch Co., New York.  
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Linolil—The Werner G. Smith Co., Cleveland, O.  
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McVicker—Wm. B. McVicker Co., Brooklyn, N. Y.  
Modoc—The Modoc Co., Inc., Fernwood, Pa.  
Oil and Waste Saving Machine Co., Philadelphia, Pa.  
Standard Chemical Corp., Kalamazoo, Mich.  
20th Century—Theo. B. Robertson Products Co., Inc., Chicago, Ill.

### SOCKETS, BOLT, CONCRETE.

Janney, Steinmetz & Co., Philadelphia, Pa.  
Modern Mfg. Co., Cleveland, Ohio.

### SOCKETS AND RECEPTACLES, ELECTRICAL.

Federal—Federal Electric Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Inland Electric Co., Chicago, Ill.

### SOCKETS AND SLEEVES, DRILL.

Allen Friction—Allen Wrench & Tool Co., Providence, R. I.  
❖ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
Clark Equipment Co., Buchanan, Mich.  
❖ The Cleveland Twist Drill Co., Cleveland, O.  
Detroit Reamer & Tool Co., Detroit, Mich.  
Detroit Twist Drill Co., Detroit, Mich.  
Etna Company, Taunton, Mass.  
❖ Keystone—Keystone Mfg. Co., The, Buffalo, N. Y.

"USE-EM-UP"

STANDARD

## Sockets and Sleeves

Manufactured by  
American Specialty Co. — Lovejoy Tool Works  
323 West Ohio St., Chicago

- Morse Twist Drill & Machine Co., New Bedford, Mass.
- ❖ **Perfect, Double Tang**—The Cleveland Twist Drill Co., Cleveland, O.
- Sager Automatic—Sager Drill Socket Co., West Albany, N. Y.
- ❖ Standard Tool Co., Cleveland, O.
- ❖ Union Twist Drill Co., Athol, Mass.
- ❖ **Use-Em-Up—Lovejoy Tool Works**, Chicago, Ill.
- Wear Ever—Scully Jones & Co., Chicago, Ill.
- ❖ Whitman & Barnes Co., The, Akron, O.

**SOCKETS, DRILL, "USE-EM-UP."**

- ❖ Cleveland Twist Drill Co., Cleveland, O.
- ❖ Collis Co., Clinton, Ia.
- ❖ **Lovejoy Tool Works**, Chicago, Ill.
- Modern Tool Co., Erie, Pa.
- Use-em-up—American Specialty Co., Chicago, Ill.

**SOCKETS, LOCKING, FOR ELECTRIC LAMPS.**

- Fischer & Hayes Rope & Steel Co., Chicago, Ill.
- Shurlok—Pass & Seymour, Inc., Syracuse, N. Y.

**SOCKETS, WIRE ROPE.**

(See also "Fittings, Wire Rope.")

- The Thomas Laughlin Co., Portland, Me.
- U. W.—The Upson-Walton Co., Cleveland, O.
- Walworth Mfg. Co.**, Boston, Mass.
- Wilcox, Crittenden & Co., Inc., Middletown, Conn.
- ❖ Williams, J. H., & Co., Brooklyn, N. Y.

**SOFTENERS, WATER.**

- American—American Water Softener Co., Philadelphia, Pa.
- Ansonia Mfg. Co., Ansonia, Conn.
- Booth—The Refinite Co., Omaha, Neb.
- Borromite, Rapid Rate, Zeolite—Borromite Co. of America, The, Chicago, Ill.
- Cochrane—H. S. B. W. Cochrane Corp., Philadelphia, Pa.
- Dehn's Peerless—Compound Injector & Specialty Co., Chicago, Ill.
- ❖ Eureka—Dodge Sales & Engineering Co., Mishawaka, Ind.
- Fetta—Practical Mfg. & Chemical Co., Richmond, Ind.
- Goode Water Filter & Purifier Mfg. Co., Allentown, Pa.
- Hot Flow—International Filter Co., Chicago, Ill.
- Hungerford—Hungerford & Terry, Inc., Philadelphia, Pa.
- International—International Filter Co., Chicago, Ill.
- International Boiler Compound Co., Chicago, Ill.
- Kennicott—Kennicott Water Softener Co., Chicago, Ill.
- Lord—Geo. W. Lord Co., Philadelphia, Pa.
- New York Continental Jewell Filtration Co., New York, N. Y.
- Northern System—Northern Water Softener Co., Madison, Wis.
- Permutit—The Permutit Co., New York, N. Y.
- Pittsburgh Filter & Eng. Co., Pittsburgh, Pa.
- Radax—Porcela-Radax Co., Pittsburgh, Pa.
- Refinite—The Refinite Co., Omaha, Nebr.
- Richmond Water Softener Co., Richmond, Ind.
- Russell—Russell-Kinkaid Co., Chicago, Ill.
- Sealife—Wm. B. Sealife & Sons Co., Pittsburgh, Pa.

**SOIL, PLUMBERS.**

- Bernz, Otto, Co., Newark, N. J.
- Colebrook's—W. H. Colebrook's Sons, Syracuse, N. Y.
- Johnson, Wm., Newark, N. J.
- Leddys Plumbers Soil Mfg. Co., Hoboken, N. J.
- Wolverine Brass Works, Grand Rapids, Mich.

**SOLDER.**

- Ajax Metal Co., The, Philadelphia, Pa.
- Allen, L. B., & Co., Chicago (self-fluxing stick or paste).
- Allen Tinningstick—L. B. Allen Co., Inc., Chicago, Ill.
- Alumalux—Alumalux Co., Sidney, O.
- American Lead Co., Pittsburgh, Pa.
- American Smelters Securities Co., San Francisco, Cal.
- American Solder & Flux Co., Philadelphia, Pa.
- Atkinson Co., The, Rochester, N. Y.
- Benson, Alex. R., Co., Hudson, N. Y.
- Bigsby Metals Co., The, Cleveland, O.
- Blatchford—E. W. Blatchford & Co., Chicago, Ill.
- Bruce & Cook, New York, N. Y.
- Charleston Lead Works, The, Charleston, S. C.
- Chicago Solder Co., Chicago, Ill.
- Colorado Lead Works Co., Denver, Colo.
- Columbia Smelting & Refining Co., New York, N. Y.
- Copperine B. Babbitt—Erie White Metal Co., Erie, Pa.
- Crecent—North American Smelting Co., Philadelphia, Pa.
- Delaware Metal Refinery, Philadelphia, Pa.
- Detroit Metal Refining Co., Detroit, Mich.
- Die Noflux—Reinhold Noflux Aluminum Solder Co., Newark, N. J.
- ❖ Diaston & Sons Co., Henry, Philadelphia, Pa. (for saw brazing.)
- Du Bois, F. N., & Co., Inc., The, New York, N. Y.
- Dutch Boy—National Lead Co., New York, N. Y.
- Eagle-Fisher Lead Co., Cincinnati, O.
- Eagle Smelting & Refining Works, New York, N. Y.

- Empire Metal Co., Syracuse, N. Y.
- Erie White Metal Co., Erie, Pa.
- Finn, John, Metal Works, San Francisco, Calif.
- Fleck Bros. Co., Philadelphia, Pa.
- Gardiner Metal Co., Chicago, Ill.
- Gilbert, A., & Sons Brass Foundry Co., St. Louis, Mo.
- Great Western Smelting & Refining Co., Chicago, Ill.
- Hendy—N. & G. Taylor Co., Philadelphia, Pa.
- Hoyt Metal Co., St. Louis, Mo.
- Kester Wire Solder—Chicago Solder Co., Chicago, Ill.
- Lehman Bros., Hoboken, N. J.
- Lewis—National Lead Co., New York, N. Y.
- Lissberger & Son, Inc., Marks, Long Island City, N. Y.
- Loewenthal Co., Chicago, Ill.
- Merchant & Evans Co., Inc., Philadelphia, Pa. Trade names: Camaret, Double Refined, Extra Fine, M. & Co., Standard, Tinsmiths.
- Michigan Smelting & Refining Co., Detroit, Mich. (bar and wire).
- Millar & Son Co., Chas., Utica, N. Y.
- More-Jones Brass & Metal Co., St. Louis, Mo.
- ❖ Motex—L. M. Jacobson & Sons Co., Detroit, Mich.
- Navy—Puget Sound Metal Works, Tacoma, Wash.
- Neverslip—E. M. Lang Co., Portland, Me.
- New Process—Lissberger & Son, Inc., Marks, Long Island City, N. Y.
- North American Smelting Co., Philadelphia, Pa.
- North Star Foundry Co., Minneapolis, Minn.
- Pacific Metal Works, San Francisco, Calif.
- Peerless Special, Strictly Half & Half, Wire Solder—The Peerless Alloy Co., Denver, Colo.
- Plumbers Wiping—National Lead Co., New York.
- Pennsylvania Smelting Co., Pittsburgh, Pa.
- Premium Alumaloy—Premium Metal & Packing Co., Wilkinsburg, Pa.
- Rainbow—Peerless Smelting & Refining Co., Philadelphia, Pa.
- Raymond Lead Co., Chicago, Ill.
- Reinhold No Flux Aluminum Solder Co., Irvington, N. J. (quick weld).
- Richards & Co., Inc., Boston, Mass.
- Rinehart—Pittsburgh White Metal Co., Pittsburgh, Pa.
- Riverside Metal Refining Co., Connellsville, Pa.
- Rochester Lead Works, Rochester, N. Y.
- Shonberg, I., Inc., Brooklyn, N. Y.
- Sloans, Superior—Samuel Sloan & Co., Rochester, N. Y.
- Smiro—Smith & Robinson, Chicago, Ill.
- Solderall—Solderall Co., Newark, N. J.
- Standard Smelting & Refining Co., New York, N. Y.
- Stromi—Standard Rolling Mills, Inc., Brooklyn, N. Y.
- Superior—North American Smelting Co., Philadelphia, Pa.
- Syracuse Smelting Works, Brooklyn, N. Y.
- Syracuse—United American Metals Corp., Brooklyn, N. Y.
- Union Smelting & Refining Co., Newark, N. J.
- United Lead Co., New York, N. Y.
- United Lead Co., St. Paul, Minn.
- United Smelting & Aluminum Co., New Haven, Conn.
- United States Reduction Co., East Chicago, Ind.
- Wensley Metal Products Co., Denver, Colo.
- Weldwell—Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wildes' Sons, Inc., Thos., New York, N. Y.
- Wilson Welder & Metals Co., Brooklyn, N. Y.
- Wizard—S. Birkenstein & Sons, Inc., Chicago, Ill.

**SOLDER, ALUMINUM.**

- Allen, L. B., Co., Inc., Chicago, Ill.
  - Alumalux—Alumalux Co., Sidney, Ohio.
  - Aluminum Brazing Solder Co., Chester, Pa.
  - Atkinson Co., The, Rochester, N. Y.
  - Combination—Reinhold Noflux Aluminum Solder Co., Newark, N. J.
  - Die Casting Solder—Reinhold Noflux Aluminum Solder Co., Newark, N. J.
  - Eagle Smelting & Refining Works, New York.
  - Hungerford, U. T., Brass & Copper Co., New York, N. Y.
  - Janney, Steinmetz & Co., Philadelphia, Pa.
  - ❖ Lumen Bearing Co., Buffalo, N. Y.
  - Noflux, and Noflux Special—Reinhold Noflux Aluminum Solder Co., Newark, N. J.
  - Richards & Co., Inc., Boston, Mass.
  - Semper Idem—Wildes' Sons, Inc., Thos., New York, N. Y.
  - So-Luminum—So-Luminum Mfg. & Eng. Co., Inc., New York, N. Y.
  - Sterling—Sterling Aluminum Solder Co., Inc., Brooklyn, N. Y.
  - Super Brand—The Lenk Mfg. Co., Boston, Mass.
  - United Smelting & Aluminum Co., New Haven, Conn.
  - Union Smelting & Refining Co., Inc., Newark, N. J.
  - Universal—Universal Fluxine Co., Urbana, O.
  - Walls New Process—The Bigsby Metals Co., Cleveland, O.
  - Weld Wire Co., The, Brooklyn, N. Y.
- SOLDERING SETS.**
- Allen, L. B., Co., Inc., Chicago, Ill.

Barrett, W. L., Bristol, Conn.  
 Nokorode Solderkit—M. W. Dunton Co., Providence, R. I.  
 Peck, Stow & Wilcox Co., The, Southington, Conn.  
 Super Mechanics—The Lenk Mfg. Co., Boston, Mass.

**SOLDER, SILVER.**

American Brass Co., Waterbury, Conn.  
 Benson, H. H. & F. S., Glen Ridge, N. J.  
 Edge & Co., Frank, Grand Rapids, Mich.  
 Hungerford, W. T., Brass & Copper Co., New York.  
 Mackenzie-Walton Co., Pawtucket, R. I.  
 Noble, F. H., & Co., Chicago, Ill.  
 ♦ Simonds Mfg. Co., Fitchburg, Mass.  
 United Wire & Supply Co., Providence, R. I.

**SOLDER, SPELTER OR BRAZING.**

American Brass Co., The, Waterbury, Conn.  
 Eagle Smelting & Refining Works, New York.  
 Hungerford, U. T., Brass & Copper Co., New York, N. Y.  
 Michigan Smelting & Refining Co., Detroit, Mich.  
 North American Smelting Co., Philadelphia.  
 Shriner, McGlynn & Co., Philadelphia.  
 Trenton Smelting & Refining Co., Trenton, N. J.

**SOLDERING FLUX, PASTE, STICK AND LIQUID.**

Allen, L. B., Co., Inc., Chicago, Ill.  
 American Solder & Flux Co., Philadelphia, Pa.  
 Anchor—Garden City Laboratory, Chicago, Ill.  
 B B—B B Specialty Co., Pittsburgh, Pa.  
 Baltimore Chemical Co., Baltimore, Md.  
 Blue Seal—Blue Seal Chemical Co., Roselle, N. J.  
 Burnley—Burnley Battery & Mfg. Co., North East, Pa.  
 Callahan's—Geo. Callahan Co., New York, N. Y.  
 Canfield, M. C., Sons Co., Newark, N. J.  
 Corliss C C—Corliss Supply & Mfg. Co., St. Louis, Mo.  
 Crescent—McGill Mfg. Co., Valparaiso, Ind.  
 Eureka—The Grasselli Chemical Co., Cleveland, O.  
 Fluxine—Krembs & Company, Chicago, Ill.  
 Highland Electric Chemical Co., Connellsville, O.  
 Hungerford, U. T., Brass & Copper Co., New York, N. Y.  
 Johnson's—Johnson Mfg. Co., Chicago, Ill.  
 Kester Wire Solder—Chicago Solder Co., Chicago, Ill.  
 Los Angeles Smelting Co., Los Angeles, Cal.  
 Millers Falls Co., New York, N. Y.  
 New Code—James W. Poole, Inc., Boston, Mass.  
 Nokorode—The M. W. Dunton Co., Providence, R. I.  
 Norwesco—The Northwestern Chemical Co., Marietta, Ohio.  
 Presto—L. B. Allen Co., Inc., Chicago, Ill.  
 Rajah—Alumalux Co., Sidney, O.  
 Red Letter, Ruby Fluid—Ruby Chemical Co., Columbus, O.  
 Sandoval Zinc Co., Chicago, Ill.  
 Samson—L. B. Allen Co., Inc., Chicago, Ill.  
 Solderall—Solderall Co., Newark, N. J.  
 Solderene—Solderene Mfg. Co., Boston, Mass.  
 Spot—General Mfg. Co., Oil City, Pa.  
 Star—McGee Mfg. Co., Valparaiso, Ind.  
 Star—The Crescent Co., Chicago, Ill.  
 Starbuck's—R. M. Starbuck & Sons, Hartford, Conn.  
 Sun—L. B. Allen Co., Inc., Chicago, Ill.  
 Superior—North American Smelting Co., Philadelphia.  
 Universal—Universal Fluxine Co., Urbana, O.  
 Webb—Webb Mfg. Co., Newark, N. J.  
 Weld Wire Co., The, Brooklyn, N. Y.  
 Yager's—Alex R. Benson Co., Inc., Hudson, N. Y.

**SOLDERING TOOLS, GAS.**

Allen, L. B., Co., Inc., Chicago, Ill.  
 Clark—Chicago Well Supply Co., Chicago, Ill.

**SPACERS, MILLING CUTTER.**

Detroit Stamping Co., Detroit, Mich.  
 Scully, Jones & Co., Chicago, Ill.

**SPADES, BORING OR TUNNELING TOOLS, PLUMBERS'.**

Eierman Floor Scraper Co., Brooklyn, N. Y.

**SPANNERS, DROP FORGE.**

♦ Falcon—J. H. Williams & Co., Brooklyn, N. Y.

**SPANNERS, WASTE PLUG.**

♦ Williams, J. H., & Co., Brooklyn, N. Y.

**SPANNERS, ROSE.**

Allen—The Allen Fire Department Supply Co., Providence, R. I.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Forsyth Metal Goods Co., Buffalo, N. Y.  
 Hayward & Co., S. F., New York, N. Y.  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Leonard—Callahan Co., The, Connellsville, Boston, Mass.  
 Schlangen Bros. Co., Chicago, Ill.

**Nason Manufacturing Company**

ESTABLISHED BY JOSEPH NASON IN 1841

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71 Fulton Street

New York

♦ Taber's Reversible—Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Vulcan Tool Mfg. Co., The, Quincy, Mass.

**SPEARS, OIL WELL CASING.**

Spang—Spang & Co., Butler, Pa.

**SPECIALTIES, STEAM.**

(Look for name of articles desired.)

**SPEEDERS, DRILL.**

Graham Mfg. Co., The, Providence, R. I.

**SPHEROMETERS.**

Columbia—Columbia Caliper Co., Marietta, Pa.

**SPIGOTS, TAPPED.**

Kupferle, John C., Foundry Co., St. Louis, Mo.

**SPIKES, RAILROAD.**

Ames Co., W., Jersey City, N. J.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Elyria Iron & Steel Co., Elyria, O.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Frank, M. K., Pittsburgh, Pa.  
 Illinois Steel Co., Chicago, Ill.  
 Inland Steel Co., Chicago, Ill.  
 ♦ J. & L.—Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Kansas City Bolt & Nut Co., The, Kansas City, Mo.  
 Lackawanna Steel Co., Lackawanna, N. Y.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 ♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
 ♦ Republic Iron & Steel Co., Youngstown, O. (and boat).  
 Scranton Bolt & Nut Co., Scranton, Pa.  
 Texas Rolling Mill Co., Fort Worth, Tex.

**SPIKES, WIRE AND CUT.**

♦ American Bolt Co., Birmingham, Ala.  
 ♦ American Steel & Wire Co., Chicago, Ill.  
 ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
 Ames, W., & Co., Jersey City, N. J. (Boat, dock, galvanized, mine).  
 Bayonne Bolt & Nut Co., Bayonne, N. J.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 Delaware Steel Co., New York.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Hirsch Rolling Mill Co., St. Louis, Mo.  
 Illinois Steel Co., Chicago, Ill.  
 Inland Steel Co., Chicago, Ill.  
 ♦ Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 ♦ La Belle Iron Works, Steubenville, O.  
 Lanz, Mathew, & Sons, Pittsburgh, Pa.  
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.  
 ♦ Republic Iron & Steel Co., Pittsburgh, Pa.  
 ♦ Republic Iron & Steel Co., Youngstown, O.  
 ♦ Richardson, Edro., Brass Co., Baltimore, Md.  
 Scranton Bolt & Nut Co., Scranton, Pa.

**SPINDLES, GRINDSTONE.**

Hoppen, J. E., & Sons, Belleville, N. J.

**SPLITTERS, NUT.**

Carolus—Carolus Mfg. Co., Sterling, Ill.  
 Carolus—W. A. Whitney Mfg. Co., Rockford, Ill.

**SPLITTERS, WOOD.**

American—American Saw Mill Machinery Co., Hackensack, N. J.  
 Glascock Stove & Mfg. Co., Greensboro, N. C.  
 Hildreth Bros.—Lewis R. Ripley, Harvard, Mass.  
 Hill-Curtis Co., Kalamazoo, Mich.  
 Multnomah Iron Works, Portland, Ore.  
 Wheland—The Wheland Co., Chattanooga, Tenn.

**SPOKESHAVES, WOOD.**

Goodell-Pratt Co., Greenfield, Mass.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Johnson, Wm., Newark, N. J. (wood).  
 Millers Falls Co., New York, N. Y.  
 Schmitt, Wm., Co., Newark, N. J.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 White Co., The L. & I., Buffalo, N. Y.



**SPOUTS, BASIN COOK.**

Bridgeport Brass Co., Bridgeport, Conn.  
Waterbury Mfg. Co., Waterbury, Conn.

**SPRAYERS, AIR.**

Surtly Mfg. Co., Inc., Chicago, Ill.

**SPRAYERS, FOUNDRY.**

Malleable Fittings Co., Branford, Conn.

**SPRAYERS, GASOLINE ENGINE.**

(See also "Machines, Spraying.")

Bond Bros., Spencerville, Md.  
Field Force Pump Co., Elmira, N. Y. (Trade names—  
Junior Leader, Senior Leader, Royal Leader,  
Watson, Empire.

**SPRAYERS, HAND POWER.**

(See also "Pumps, Spray.")

♦ Deming Co., The, Salem, O. Trade names—Aerospra,  
Success, Century, Gardener's Choice, Major,  
Prize, Planet, Perfect Success, Handy Success,  
Universal, Farmer's Friend, Planter's Gem, Sam-  
son.

Geo. W. Diener Mfg. Co., Chicago, Ill.  
Hardie Mfg. Co., Hudson, Mich.  
Hayes Fruit Fog Sprayers—Hayes Pump & Planer  
Co., Galva, Ill.

**SPRAYERS, MINE.**

American Moistening Co., Boston, Mass.  
Stine, S. B., Osceola Mills, Pa.

**SPRAYERS AND SPRINKLERS, OIL, TAR AND WATER.**

Anthony Co., The, Long Island City, N. Y.  
Eldus—Union Iron Works, Hoboken, N. J.  
Good Roads Machinery Co., Kennett Square, Pa.  
International Motor Co., New York.  
Johnston—Standard Mfg. Co., Worcester, Mass.  
Kinney—Kinney Mfg. Co., Boston, Mass.

**SPRAYERS, TREE AND WHITEWASH.**

Hardie Mfg. Co., Hudson, Mich.  
Hayes Pump & Planer Co., Galva, Ill.  
Koenigkramer, F. & F., Cincinnati, O.  
New Watson—Field Force Pump Co., Elmira, N. Y.  
Paragon—Campbell-Hausfeld Co., Harrison, O.  
Reade & McKenna, Brooklyn, N. Y.

**SPRAYS, BASIN AND BATH.**

American Pln Co., Waterbury, Conn.  
Art Brass Co., New York, N. Y.  
Boekel & Co., Wm., Philadelphia, Pa.  
Brasscrafters—J. P. Eustis Mfg. Co., Boston, Mass.  
Central Specialty Mfg. Co., Chicago, Ill.  
Durst Mfg. Co., The, New York, N. Y.  
Federal-Huber Co., Chicago, Ill.  
Goetz—Goetz Brass Company, Chicago, Ill.  
Haydenville Co., The, Haydenville, Mass.  
Liberty Mfg. Co., The, East Norwalk, Conn.  
Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
Nicholls—The Liberty Mfg. Co., East Norwalk, Conn.  
Peck Bros. & Co., The, New Haven, Conn.  
Smith Mfg. Co., E. C., Chicago, Ill.  
Taylor, Geo., Brass & Bronze Works, Inc., New York,  
N. Y.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wolverine Brass Works, Grand Rapids, Mich.

**SPRAYS, URINAL.**

Acheson Mfg. Co., Braddock, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Columbus Brass Co., Columbus, O.  
Goetz—Goetz Brass Company, Chicago, Ill.  
Hedges & Brother, Newark, N. J.  
IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
Perkes Co., Charles, Philadelphia, Pa.  
Savill's Patent—Thomas Savill's Sons, Philadelphia.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Speakman Co., Wilmington, Del.  
Sherwood Brass Works, Detroit, Mich.

**SPRAYS, WATER, AUTOMATIC.**

Anthony—Anthony Co., The, Long Island City, N. Y.  
McAlear Mfg. Co., The, Chicago, Ill.  
Richter—Boylston Steam Specialty Co., Chicago, Ill.

**SPREADERS, GLUE.**

Advance—Advance Machinery Co., Van Wert, Ohio.  
Towsley—Towsley, Jno. T., Mfg. Co., Cincinnati, O.

**SPREADERS, STONE.**

Burch—Burch Plow Works Co., Crestline, O.

**SPRINGS FOR MACHINERY AND OTHER USES.**

♦ American Steel & Wire Co., Chicago, Ill.  
American Vanadium Co., Pittsburgh, Pa.  
Barnes Co., The, Wallace, Bristol, Conn.  
Bridgeport Chain Co., The, Bridgeport, Conn.  
Cleveland Wire Spring Co., The, Cleveland, O.  
Cook Spring Co., New York, N. Y.  
Eagle—Miller & Van Winkle, Brooklyn, N. Y.  
Gibson Co., The Wm. D., Chicago, Ill.  
Hubbard, M. D., Mfg. Co., Pontiac, Mich.  
Peck & Young Mfg. Co., Forestville, Conn.  
Raymond Mfg. Co., Ltd., Corry, Pa.  
Welch, T. F., & Co., Boston, Mass.  
Wickwire Spencer Steel Corp., New York.

**SPRINGS, PIPE BENDING.**

B B Specialty Co., Pittsburgh, Pa.  
Butterworth—Butterworth Supply Co., Philadelphia,  
Pa.  
Cary Spring Co., New York, N. Y.  
Cleveland Wire Spring Co., Cleveland, O.  
Geo. W. Diener Mfg. Co., Chicago, Ill.  
Gibson Co., The Wm. D., Chicago, Ill.  
♦ Mark Mfg. Co., Chicago, Ill.  
Morgan Spring Co., Worcester, Mass.  
Raymond Mfg. Co., Ltd., Corry, Pa.  
Starbucks—R. M. Starbuck & Sons, Hartford, Conn.  
Woodward-Wanger Co., Philadelphia, Pa.

**SPRINGS AND BUMPERS, RUBBER.**

♦ Boston Belting Co., Boston, Mass.  
Canfield Rubber Co., The, Bridgeport, Conn.  
♦ Cincinnati Rubber Mfg. Co., Cincinnati, O.  
Diamond Rubber Co., Inc., The, Akron, O.  
Hewitt Rubber Co., Buffalo, N. Y.  
Mechanical Rubber Co., Chicago, Ill.  
Pioneer Rubber Mills, San Francisco, Calif.  
Revere Rubber Co., Boston, Mass.  
♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
Vall Rubber Co., Chicago, Ill.  
Whitehead Bros. Rubber Co., Trenton, N. J.  
Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.

**SPRINGS, VALVE.**

Ashton Valve Co., Boston, Mass.  
Cary Spring Co., New York, N. Y.  
Dunbar Bros. Co., Bristol, Conn.  
Gibson Co., The Wm. D., Chicago, Ill.  
Miller Wire Spring Co., Bridgeport, Conn.  
Raymond Spring Co., Corry, Pa.  
Wallace-Barnes Co., The, Bristol, Conn.

**SPRINGS, WAGON, CARRIAGE, ETC.**

Heartley Machine Variety Iron & Tool Works, Toledo,  
Ohio.

**SPRINKLERS, AUTOMATIC FIRE, HEADS AND SYSTEMS.**

Aetna Fire Sprinkler Co., Chicago, Ill.  
Crowder Bros., St. Louis, Mo.  
Esty—Esty Sprinkler Co., Laconia, N. H.  
Globe Automatic Sprinkler Co., Cincinnati, O.  
Globe—Globe Automatic Sprinkler Co., Philadelphia,  
Pa.  
Grinnell Company, Providence, R. I.  
Illinois Malleable Iron Co., Chicago, Ill.  
International—International Sprinkler Co., New York.  
Liberty—Liberty Mfg. Assn., Chicago, Ill. (for mines).  
Manufacturers'—Automatic Sprinkler Co. of America,  
New York, N. Y.  
Parks Cramer Co., Charlotte, N. C.  
Rockwood—Rockwood Sprinkler Co. of Massachusetts,  
Worcester, Mass.  
Rockwood—Rockwood Sprinkler Co., Chicago, Ill.  
Thompson Mfg. Co., Los Angeles, Cal. (cooling towers).

**SPRINKLERS, COAL.**

Edna Brass Mfg. Co., The, Cincinnati, Ohio. (Loco-  
motive.)  
Nathan Mfg. Co., New York, N. Y.

**SPRINKLERS, IRRIGATION.**

Cactus, Japanese, American Foundry & Mfg. Co., St.  
Louis, Mo.  
Lewis—Universal Irrigation Co., Philadelphia, Pa.  
Rain Cloud Nozzle—Cornell, W. G., Co., Chicago, Ill.  
Skinner Irrigation Co., Troy, Ohio.

**SPRINKLERS, LAWN.**

Acme-Elkhart Brass Mfg. Co., Elkhart, Ind.  
American—American Foundry & Mfg. Co., St. Louis.  
The Armstrong Mfg. Co., Huntington, W. Va.  
Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Blake—W. D. Allen Mfg. Co., Chicago, Ill.  
Bon Mfg. Co., Elgin, Ill.  
Brooks, John A., Detroit, Mich.  
Buckley Rubber Co., J. W., New York, N. Y.  
Busy—W. D. Allen Mfg. Co., Chicago, Ill.  
Cactus—American Foundry & Mfg. Co., St. Louis, Mo.  
C. B. G.—W. D. Allen Mfg. Co., Chicago, Ill.

Clow & Sons, James B., Chicago, Ill.  
 Columbia—W. D. Allen Mfg. Co., Chicago, Ill.  
 Crescent Ring—Handy—L. R. Nelson, Peoria, Ill.  
 Cyclone—W. D. Allen Mfg. Co., Chicago, Ill.  
 ♦ Deluge—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Detroit Register Co., Detroit, Mich.  
 Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.  
 Elk—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Enterprise—The Enterprise Mfg. Co. of Pennsylvania, Philadelphia, Pa.  
 Evanston—W. D. Allen Mfg. Co., Chicago, Ill.  
 Even Spread—Patterson Lock Nut Mfg. Co., Chicago, Ill.  
 Farnan Brass Works, Cleveland, O.  
 Fishtail—The Peck Bros. & Co., New Haven, Conn.  
 Fountain—The Armstrong Mfg. Co., Huntington, W. Va.  
 Garden City—W. D. Allen Mfg. Co., Chicago, Ill.  
 Gaylord—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Half Circle—The Armstrong Mfg. Co., Huntington, W. Va.  
 Hartford—W. D. Allen Mfg. Co., Chicago, Ill.  
 Hoosier—Elkhart Brass Mfg. Co., Elkhart, Ind.  
 ♦ Hot House—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 Imperial—American Fdy. & Mfg. Co., St. Louis, Mo.  
 Japanese—National American Foundry & Mfg. Co., St. Louis, Mo.  
 Louisiana—American Fdy. & Mfg. Co., St. Louis, Mo.  
 Mayflower, Universal, Newport, Eureka, Zenith, Anacanda, Ring—W. D. Allen Mfg. Co., Chicago, Ill.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Novelty Mfg. Co., Waterbury, Conn.  
 Pacific—American Foundry & Mfg. Co., St. Louis, Mo.  
 Patterson Lock Nut Mfg. Co., Chicago, Ill.  
 Peck's Improved—The Peck Bros. & Co., New Haven, Conn.  
 Rainbow—Turner & Seymour Mfg. Co., The, Torrington, Conn.  
 Rainfall—Hardware Specialties Co., Springfield, Ohio.  
 Randolph—Ideal Bronze Co., Cleveland, O.  
 Rival—The Peck Bros. & Co., New Haven, Conn.  
 ♦ Rose—H. B. Sherman Mfg. Co., Battle Creek, Mich.  
 Schlangen Bros. Co., Chicago, Ill. Trade names—Boulevard, Carnical, Chicago, Fantan, Geyser, Irving Park, Neptune, Raindrop, Rex, Schlangen and Simplex.  
 Seattle Brass Co., Seattle, Wash.  
 Specialty Mfg. Co., St. Anthony Park, Minn.  
 Spiral—Bullock Mfg. Associates, Springfield, Mass.  
 Square Fountain—L. R. Nelson, Peoria, Ill.  
 Stearns—E. C. Stearns & Co., Syracuse, N. Y.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Sunshine—American—American Foundry & Mfg. Co., St. Louis, Mo.  
 Thompson Mfg. Co., Los Angeles, Cal.  
 Water Witch—The Peck Bros. & Co., New Haven, Conn.

#### SPROCKETS.

(See "Wheels, Sprocket")

#### SPUDS, WATER CLOSET.

American Sanitary Mfg. Co., Abingdon, Ill.  
 Ayling & Reichert Co., Toledo, O.  
 Indiana Brass Co., The, Frankfort, Ind.  
 M. V. B.—Morency-Van Buren Mfg. Co., Sturgis, Mich.  
 Trenton Brass & Machine Co., Trenton, N. J.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 Waterbury Mfg. Co., Waterbury, Conn.

#### SQUARES, CALIPER.

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Starrett Co., The L. S., Athol, Mass.

#### SQUARES, CARPENTERS'.

♦ Almond, T. R., Mfg. Co., Ashburnham, Mass.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Nicholls—Nicholls Mfg. Co., Ottumwa, Ia.  
 ♦ Peck, Stow & Wilcox Co., New York, N. Y.  
 Sargent & Co., New Haven, Conn.  
 Southington Hardware Co., The, Southington, Conn.  
 ♦ Stanley Rule & Level Co., New Britain, Conn.  
 Starrett Co., The L. S., Athol, Mass.

#### SQUARES, CENTER.

Starrett Co., The L. S., Athol, Mass.

#### SQUARES, COMBINATION.

♦ Almond, T. R., Mfg. Co., Ashburnham, Mass.  
 Brown & Sharpe Mfg. Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Starrett Co., The L. S., Athol, Mass.  
 ♦ Union Tool Co., Orange, Mass.

#### SQUARES, DOUBLE.

Starrett Co., The L. S., Athol, Mass.

#### SQUARES, DRAUGHTSMEN'S "T".

Keuffel & Esser Co., New York, N. Y.  
 Noyes—Emmert Mfg. Co., Waynesboro, Pa.  
 Starrett Co., The L. S., Athol, Mass.

#### SQUARES, MACHINISTS'.

♦ Almond, T. R., Mfg. Co., Ashburnham, Mass.  
 ♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 ♦ Disston's Sons, Henry, Philadelphia, Pa.  
 Simplex Tool Co., Woonsocket, R. I.  
 Starrett Co., The L. S., Athol, Mass.  
 Union Tool Co., Orange, Mass.

#### SQUARES, MICROMETER CALIPER.

Starrett Co., The L. S., Athol, Mass.

#### SQUARES, MITER.

♦ Disston's Sons, Inc., Henry, Philadelphia, Pa.

#### SQUARES, TRY.

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
 Buffum Tool Co., Louisiana, Mo.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Southington Hdwe. Co., Southington, Conn.  
 Stanley Rule & Level Co., New Britain, Conn.  
 Starrett Co., The L. S., Athol, Mass.  
 Welch, T. F., & Co., Boston, Mass.

#### SQUEEZERS, CORN FODDER, OR ROPE CLAMPS.

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

#### SQUIBS, GAS, SULPHUR, ELECTRIC AND MINERS'.

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.  
 (Trade names—Du Pont, D. & B., Blue Label, Powell.)  
 Hercules Powder Co., Wilmington, Del.  
 Howells—Howells Mining Drill Co., Plymouth, Pa.

#### STACKERS OR PILERS, LUMBER.

Bradney Machine Co., Inc., Middletown, N. Y.  
 Hilke—Seattle Machine Works, Seattle, Wash.  
 Soule Steam Feed Works, Meridian, Miss.  
 North Coast Dry Kiln Co., Seattle, Wash.

#### STADIA, ARC.

Beaman—W. & L. E. Gurley, Troy, N. Y.

#### STALLS, CLOSET, IRON FRAME.

S. I. & M. H.—J. L. Mott Iron Works, New York, N. Y.

#### STALLS AND PARTITIONS, GLASS.

American Warming & Ventilating Co., Elmira, N. Y.  
 Federal-Huber Co., Chicago, Ill.

#### STALLS AND PARTITIONS, MARBLE.

Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Nelson Marble Co., N. O., Edwardsville, Ill.  
 Standard Plumbing Supply Co., New York, N. Y.  
 Wolff, L., Mfg. Co., Chicago, Ill.

#### STALLS AND PARTITIONS, PORCELAIN.

Alberne Stone Co., New York, N. Y.  
 Bellevue—Haines, Jones & Cadbury Co., Philadelphia.  
 Continental—The Trenton Potteries Co., Trenton, N. J.  
 Ebco—D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hinsdale—The Trenton Potteries Co., Trenton, N. J.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 Monarch—L. Wolff Mfg. Co., Chicago, Ill.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Paragon—The Sanitary Co., Cleveland, O.  
 Phoenix Ceramic Works, Perth Amboy, N. J.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia.  
 Santos Mfg. Co., Boston, Mass.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### STALLS AND PARTITIONS, SLATE.

Alpha Slate Mfg. Co., The, Bangor, Pa.  
 American Warming & Ventilating Co., Elmira, N. Y.  
 Bangor Structural Slate Co., Bangor, Pa.  
 Crane Co., Chicago, Ill.  
 East Bangor Consolidated Slate Co., The, East Bangor, Pa.  
 Fair Haven Marble & Marbleized Slate Co., Fair Haven, Vt.  
 Federal-Huber Co., Chicago, Ill.  
 German-American Stoneware Works, New York, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.

Keenan Structural Slate Co., Bangor, Pa.  
 McConnell Slate Co., Brooklyn, N. Y.  
 Miller Slate Co., O. A., Slatington, Pa.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Nelson Marble Co., N. O., Edwardsville, Ill.  
 New York Slate Works, The, New York, N. Y.  
 Pennsylvania Structural Slate Co., Easton, Pa.  
 Penrhyn Slate Co., The, Middle Granville, N. Y.  
 Phoenix Slate Co., The, Wind Gap, Pa.  
 Rutland Marble Mfg. Co., Rutland, Vt.  
 Standard Plumbing Supply Co., New York, N. Y.  
 Structural Slate Co., The, Pen Argyl, Pa.  
 Vendor Slate Co., Easton, Pa.  
 Western Slate Co., Chicago, Ill.  
 Wolff Mfg. Co., L., Chicago, Ill.  
 Woodley—Woodley Slate Co., Bangor, Me.

#### STALLS AND PARTITIONS, CLOSET SHOWER AND DRESSING ROOM, STEEL

Ebinger Sanitary Mfg. Co., D. A., Columbus, O.  
 Hart & Hutchinson Co., New Britain, Conn.  
 Sanymetal—Sanymetal Products Co., The, Cleveland, O.  
 Weisteel—Henry Weis Mfg. Co., Atchison, Kan.

#### STALLS AND PARTITIONS, STONE.

Alberene Stone Co., Chicago and New York.  
 Diamond—Robinson Stoneware Co., Brooklyn, N. Y.  
 Euclid Stone, AA Grade—Euclid Stone & Brick Co., Cleveland, O.  
 Paragon—Paragon Brass Mfg. Co., Cleveland, O.  
 Union Soapstone Co., Boston, Mass.

#### STALLS AND PARTITIONS, VITROLITE.

Vitrolite—The Vitrolite Company, Chicago, Ill.

#### STAMPINGS, ALUMINUM.

American Nut & Bolt Fastener Co., Pittsburgh, Pa.

#### STAMPINGS, SHEET METAL.

(See also "Shapes, Pressed Steel")

A. & J. Mfg. Co., Binghamton, N. Y.  
 Acklin Stamping Co., Toledo, O.  
 Adell Mfg. Co., Orange, Mass.  
 Advance Mfg. Co., Racine Junction, Wis.  
 Allegheny Steel Co., Pittsburgh, Pa.  
 American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 American Pulley Co., The, Philadelphia, Pa.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 American Tube & Stamping Co., Bridgeport, Conn.  
 Barnes, Wallace, Co., The, Bristol, Conn.  
 Bay State Stamping Co., Worcester, Mass.  
 Beaton, A. J., Mfg. Co., New Britain, Conn. (Light.)  
 Best Stove Co., Detroit, Mich.  
 Bettcher Stamping & Mfg. Co., Cleveland, O.  
 Bevin Bros. Mfg. Co., East Hampton, Conn.  
 Bliss Mfg. Co., E. C., Providence, R. I.  
 Bossert Co., Utica, N. Y.  
 Boston Pressed Metal Co., Worcester, Mass.  
 Bowen Products Corp., Auburn, N. Y.  
 Bridgeport Chain Co., The, Bridgeport, Conn.  
 Buhl Stamping Co., Detroit, Mich.  
 Century Telephone Construction Co., Buffalo, N. Y.  
 Chattanooga Stamping & Enameling Co., Chattanooga, Tenn.  
 Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Cleveland City Forge & Iron Co., Cleveland, O.  
 Cleveland Stamping & Tool Co., Cleveland, O.  
 Cleveland Block Co., Cleveland, O.  
 Cleveland Wrought Products Co., Cleveland, O.  
 Conley, F. Co., The, Detroit, Mich.  
 Connecticut Brass Corp., Waterbury, Conn.  
 Consolidated Mfg. Co., Dayton, Ohio.  
 Crosby Co., Buffalo, N. Y.  
 Curtis, Albert B., Worcester, Mass.  
 Detroit Pressed Steel Co., Detroit, Mich.  
 Detroit Stamping Co., Detroit, Mich.  
 Dewes, A., Co., New York, N. Y.  
 Diamond—Frank Mossberg Co., Attleboro, Mass.  
 Doud Lighting Co., Chicago, Ill.  
 Eastern Machinery & Stamping Co., Providence, R. I.  
 Erdle Perforating Co., Rochester, N. Y.  
 Excelsior Needle Co., Torrington, Conn.  
 Faries Mfg. Co., Decatur, Ill.  
 Federal Pressed Steel Co., Milwaukee, Wis.  
 Forg—Peter Forg Mfg. Co., Somerville, Mass.  
 Gaynor & Mitchell Mfg. Co., Bridgeport, Conn.  
 Gem Mfg. Co., Pittsburgh, Pa.  
 Gem Stamped Steel Co., Boston, Mass.  
 Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
 Globe Machinery & Stamping Co., Cleveland, O.  
 Grafton Mfg. Co., Martins Ferry, O.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Great Lakes Forge Co., Chicago, Ill.  
 Harry Brothers Mfg. Co., Detroit, Mich.  
 Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Heywood Bros. & Wakefield Co., Wakefield, Mass.  
 Hubbard Mfg. Co., M. D., Pontiac, Mich.  
 Janney, Steinmetz & Co., Philadelphia, Pa.

Jenkinson, R. C., & Co., Newark, N. J.  
 Kales-Haskel Co., Detroit, Mich.  
 Kales Stamping Co., Detroit, Mich.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Konigslow, Otto, Mfg. Co., Cleveland, O.  
 Konigslow Stamping & Tool Works, E. Cleveland, O.  
 Lansing Stamping Co., Lansing, Mich.  
 Livermore, Homer F., Inc., Boston, Mass.  
 Lindholm Metal Stamping Co., Camden, N. J.  
 Massachusetts Machine Shop, Worcester, Mass.  
 Matthews, H. A., Mfg. Co., Seymour, Conn.  
 McCord—McCord Mfg. Co., Inc., Wyandotte, Mich.  
 McMorran, Edw. E., & Co., Chicago, Ill.  
 Meriden Press & Drop Co., The, Meriden, Conn.  
 Michigan Forge & Iron Works, Detroit, Mich.  
 Michigan Metal Spinning Mfg. Co., Detroit, Mich.  
 Michigan Pressed Steel Co., Detroit, Mich.  
 Miller Wire Spring Co., Bridgeport, Conn.  
 Moss, Henry & Co., Inc., New York, N. Y.  
 Motor Products Corp., Detroit, Mich.  
 Mullins Body Corp., Stamping Dept. A, Salem, O.  
 Myers, W. F., Co., Inc., Bedford, Ind.  
 National Metal Products Co., Indianapolis, Ind.  
 National Metal Spinning & Stamping Co., New York.  
 New Haven Rivet Co., New Haven, Conn.  
 Niagara Metal Stamping Corp., Niagara Falls, N. Y.  
 Orcutt—The Toledo Washer & Stamping Co., Toledo, Ohio.

Parker White Metal & Machine Co., Erie, Pa.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Polar—Polar Mfg. Co., New York, N. Y.  
 Pratt Chuck Co., Frankfort, N. Y.  
 Pulte-Korreck Machine Co., Grand Rapids, Mich.  
 Quinsigamond Pressed Steel Co., Worcester, Mass.  
 Richmond Metal Products Co., Inc., Richmond, Va.  
 Right—Gasket Supply Co., Philadelphia, Pa.  
 Rockford Iron Works, Rockford, Ill.  
 Rockwood Sprinkler Co. of Mass, Worcester, Mass.  
 Root Co., C. J., The, Bristol, Conn.  
 Sall, H. G. Co., Chicago, Ill.  
 Schatz Mfg. Co., The, Poughkeepsie, N. Y.  
 Scranto—Scranton Acetylene Lamp Co., The, Scranton, Pa.  
 Sessions, J. H., & Son, Bristol, Conn.  
 Standard Gasket Co., Inc., Philadelphia, Pa.  
 Stanley Works, The, New Britain, Conn.  
 Stephens Nut & Bolt Co., Central Falls, R. I.  
 Struthers-Wells Co., Warren, Pa.  
 Superior Metal Products Co., Elyria, O.  
 Syracuse Stamping Co., Inc., Syracuse, N. Y.  
 The H. M. Strong Metal Products Co., Cleveland, O.  
 Truscon Steel Co., Youngstown, O.  
 Urbana Specialty Mfg. Co., Urbana, O.  
 U. S. Indestructible Gasket Co., New York, N. Y.  
 Vacco—Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 W. & S. Mfg. Co., Worcester, Mass.  
 Wallace Supplies Mfg. Co., Chicago, Ill.  
 Warner Bros. Co., Bridgeport, Conn.  
 Waterbury Brass Goods Corp., Waterbury, Conn.  
 Williamsburg Mfg. Co., Williamsburg, Mass.  
 Winkler—Charles Winkler, Inc., Newark, N. J.  
 Wolverine—Dall Steel Products Co., Lansing, Mich.  
 Worcester Pressed Steel Co., Worcester, Mass.  
 Zenite Metal Co., Indianapolis, Ind.

#### STAMPS, LETTERS AND FIGURES, STEEL.

(See also "Letters and Figures.")

Alsteel—Alsteel Mfg. Co., Battle Creek, Mich.  
 Banning, W. E., Stamp & Stencil Works, Inc., Syracuse, N. Y.  
 Chandler Co., The, Springfield, Mass.  
 Cleveland Rule Co., Cleveland, O.  
 Cleveland Steel Stamp Works, Cleveland, O.  
 Cunningham, M. E., Co., Pittsburgh, Pa.  
 Evers, Harry A., Co., Providence, R. I.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Hanson, C. H., Co., The, Chicago, Ill.  
 Kasper Stamp & Seal Co., St. Louis, Mo.  
 Knight, H. W., & Son, Seneca Falls, N. Y.  
 Leonard Engraving Works, Chicago, Ill.  
 Matthews & Co., Jas. H., Pittsburgh, Pa.  
 Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.  
 Moss, Henry, & Co., Inc., New York, N. Y.  
 Matthews—Jas. H. Matthews & Co., Pittsburgh, Pa.  
 Noble & Westbrook Mfg. Co., Hartford, Conn.  
 Pannier Bros. Stamp Co., Pittsburgh, Pa.  
 Pittsburgh Stamp Co., Inc., Pittsburgh, Pa.  
 Salco Master—Schroder & Lombard Stamp & Die Co., Inc., New York, N. Y.  
 Schwerdtle Stamp Co., The, Bridgeport, Conn.  
 Standwell—McNamara, M., Stamp & Stencil Works, New York.  
 Trenton—Boker Cutlery & Hdwe. Co., Inc., New York.  
 Voelkner & Harry Mfg. Co., Detroit, Mich.  
 Weber-Erickson-Bunting Co., Pittsburgh, Pa.  
 Yale—Hoggson & Pettis Mfg. Co., The, New Haven, Conn.

#### STAMPS, TIME, FOR OFFICE AND FACTORIES.

Automatic—Automatic Time Stamp Co., Boston, Mass.

Baird Electric Co., Chicago, Ill.  
 Bannard Stamp Co., St. Louis, Mo.  
 Commercial Utilities Mfg. Co., New York.  
 Cushman & Denison Mfg. Co., New York.  
 Meyer & Wenthe, Chicago, Ill.

#### STANDARDS, GAGE.

Wismach—O. Zernickow, New York, N. Y.

#### STANDS, ANNEALING BOX.

Columbiana Boiler Co., The, Columbiana, Ohio.

#### STANDS, ASSEMBLING, FOR MACHINE SHOPS.

Champion—Western Tool & Mfg. Co., Springfield, O.  
 Herschell & Spillman Co., North Tonawanda, N. Y.  
 New Britain Machine Co., New Britain, Conn.  
 ♦ Skinner Chuck Co., The, New Britain, Conn.

#### STANDS, DRAWING OR DRAFTSMEN'S.

Kidder, R. E., Worcester, Mass.  
 Worcester—Washburn Shops, Worcester, Mass.

#### STANDS, DRILLING, BENCH, WALL AND POST

Alemite Die-Castings Mfg. Co., Chicago, Ill.  
 Chicago Pneumatic Tool Co., New York.  
 ♦ Van Dorn—Van Dorn Electric Tool Co., Cleveland, O.

#### STANDS, EMERY GRINDER.

Badger—Badger Gas & Gasoline Engine Co., Kansas City, Kan.  
 Columbia Mfg. Co., Belleville, Ill.  
 Crescent—Columbia Mfg. Co., Belleville, Ill.  
 Ellis—Smith Mfg. Co., Inc., Buffalo, N. Y.  
 Luther Bros., Milwaukee, Wis.  
 Norton—Norton Co., Worcester, Mass.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 ♦ Roversford Foundry & Machine Co., Philadelphia, Pa.  
 Rucker—Polo Machine Co., Polo, Ill.  
 Safe—Howe Safety Appliance Co., Granite City, Ill.

#### STANDS, ENGINE, UNIVERSAL.

Manley—The Manley Mfg. Co., York, Pa.

#### STANDS, FLOOR (POWER TRANSMISSION).

(See also "Machinery, Power Transmission.")

American Tool & Machine Co., Boston, Mass.  
 Barry Right Angle—Barry Co., Muscatine, Iowa.  
 ♦ Bond Foundry & Machine Co., Manheim, Pa.  
 ♦ Chicago—Chicago Pulley & Shafting Co., Chicago, Ill.  
 ♦ Dodge Mfg. Co., Mishawaka, Ind.  
 Falls Rivet & Machinery Co., Cuyahoga Falls, O.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 ♦ Hill Clutch Co., The, Cleveland, O.  
 Hunter—James Hunter Machine Co., North Adams, Mass.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Mossberg Co., Frank Atleboro, Mass.  
 Naylor Bros., Peekskill, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Pioneer—Standard Pressed Steel Co., Philadelphia, Pa. (pressed steel).  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Sprout, Waldron & Co., Muncy, Pa.  
 ♦ Valley Iron Works, Williamsport, Pa.  
 ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

#### STANDS, FLOOR, FOR VALVES.

♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa.  
 Pratt & Cady Co., Inc., Hartford, Conn.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Walworth Mfg. Co., Boston, Mass.

#### STANDS, LAVATORY AND CLOSET DISPLAY.

Berger's—Berger Specialty Mfg. Co., Inc., Richmond, Va.  
 Fanning, Benjamin, Rochester, N. Y.  
 Heald's—John Heald, Jamestown, N. Y.

#### STANDS, MICROMETER.

Starrett Co., The L. S., Athol, Mass.

#### STANDS, MULE.

(See also "Machinery, Power Transmission.")

American Tool & Machine Co., Boston, Mass.  
 ♦ Bond Foundry & Machine Co., Manheim, Pa.  
 Canton Foundry & Mach. Co., Canton, O.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Golden's Foundry & Machine Co., Columbus, Ga.  
 ♦ Hill Clutch Co., The, Cleveland, O.

Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Link-Belt Company, Chicago and Philadelphia, Pa.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Meese & Gottfried Co., San Francisco, Cal.  
 National Foundry, Mfg. & Supply Co., Williamsport, Pa.  
 Naylor Bros., Peekskill, N. Y.  
 ♦ Wood's Sons Co., T. B., Chambersburg, Pa.

#### STANDS, OILER SET.

Halls—Hall Mfg. Co., Harrison, N. J.

#### STANDS, RANGE BOILER.

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
 American—American Foundry & Mfg. Co., St. Louis.  
 Bignall Co., The, Medina, N. Y.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Casey-Hedges Co., The, Chattanooga, Tenn.  
 Central Foundry Co., New York, N. Y.  
 Clarksville Foundry & Machine Works, Clarksville, Tenn.  
 ♦ Detroit Brass & Malleable Works, Detroit, Mich.  
 Eclipse—Kupferle Foundry Co., John C., St. Louis, Mo.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Empire—American Foundry & Mfg. Co., St. Louis, Mo.  
 Essex Foundry Co., Newark, N. J.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Foster—C. H. Foster, St. Louis, Mo.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hawks—Hugo Manufacturing Co., Duluth, Minn.  
 Hercules Iron & Supply Co., Boston, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ideal—Universal—Sanitary Company of America, Linfield, Pa.  
 Iowa Mfg. Co., Oskaloosa, Ia.  
 J. R. S.—Mechanicsville Specialty Sup. Mfg. Co., Mechanicsville, N. Y.  
 Lockwood, Johnson—J. D. Johnson Co., Philadelphia, Pa.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Miller Foundry & Specialty Co., No. Tonawanda, N. Y.  
 M. I. W.—Modern Iron Works, Quincy, Ill.  
 Olyphant Foundry Co., Olyphant, Pa.  
 Park & McKay Co., Detroit, Mich.  
 Rabe Pipe & Foundry Co., Inc., Chattanooga, Tenn.  
 Richmond Fdy. & Mfg. Co., Richmond, Va.  
 Saeco—Sanitary Company of America, Linfield, Pa.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Sanders Adjustable—American Foundry & Mfg. Co., St. Louis, Mo.  
 Sanitary Company of America, Linfield, Pa.  
 Star—American Foundry & Mfg. Co., St. Louis, Mo.  
 Sterling Specialty Co., Newcomerstown, O.  
 Sterling—Sterling Specialty Co., Pittsburgh, Pa. (with connection).  
 Swett Iron Works, A. L., Medina, N. Y.  
 Treaty Co., The, Greenville, Ohio.  
 Wessels—D. D. Wessels & Son, Detroit, Mich.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Foundry Co., Detroit, Mich.

#### STANDS, TAP & DRILL.

Waterson, J. M., Detroit, Mich.

#### STANDS, THREADING MACHINE.

Modern Machinery Co., Wilmington, Del.  
 ♦ Whitman & Barnes Mfg. Co., Akron, O.

#### STANDS, SWITCH.

American Valve and Meter Co., The, Cincinnati, O.

#### STANDS, VISE, PORTABLE.

Martin Portable Vise—H. P. Martin & Sons, Owensboro, Ky.

#### STANDPIPES, SIAMESE.

Fries & Co., Buffalo, N. Y.

#### STANDPIPES, WATERWORKS.

American Bridge Co. of New York, New York, N. Y.  
 Balzley Iron Works, The, John, Philadelphia, Pa.  
 Bass Foundry & Machine Co., The, Fort Wayne, Ind.  
 Biggs Boiler Works Co., The, Akron, O.  
 Canton Boiler & Engineering Co., Canton, O.  
 Dover Boiler Works, Dover, N. J.  
 Drake-Williams Mount Co., Omaha, Neb.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Graver, Wm., Tank Works, East Chicago, Ill.  
 Keeler Co., E., Williamsport, Pa.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Lappan Mfg. Co., The, James, Pittsburgh, Pa.  
 Lombard Iron Works & Supply Co., Augusta, Ga.  
 Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
 Memphis Steel Construction Co., Pittsburgh, Pa.  
 Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
 Muskegon Boiler Works, Muskegon, Mich.



New York Central Iron Works Co., Inc., Hagerstown, Md.  
 Osborne—Osborne High Pressure Joint & Valve Co., Chicago, Ill.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Pittsburgh Des Moines Steel Co., Des Moines, Iowa.  
 Portland Co., The, Portland, Me.  
 Riter-Conly Co., Pittsburgh, Pa.  
 Seafie, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Scannell Boiler Works, Lowell, Mass.  
 Simmons Pipe Bending Works, Newark, N. J.  
 Tippet & Wood, Phillipsburg, N. J.  
 U. S. Wind Engine & Pump Co., Batavia, Ill. (railroad).  
 Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.

**STAPLES, WIRE & WROUGHT.**

- ♦ American Steel & Wire Co., Chicago, Ill.
- Cambria Steel Co., Johnstown, Pa.
- Cobb and Drew, Inc., Plymouth, Mass.
- Hauer, J. B., Brooklyn, N. Y.
- Interstate Iron & Steel Co., Chicago, Ill.
- Keystone Steel & Wire Co., Peoria, Ill.
- Northwestern Barb Wire Co., Inc., Sterling, Ill.
- Pickering, R. S. Co., Sharon Hill, Pa.
- ♦ Pittsburgh Perfect—Pittsburgh Steel Co., Pittsburgh, Pa.
- Stanley Works, The, New Britain, Conn.
- Tower Mfg. Co., Madison, Ind.
- Wire Goods Co., The, Worcester, Mass.
- ♦ Youngstown—Youngstown Sheet & Tube Co., Youngstown, O.

**STARS, HARD IRON, FOUNDRY.**

National Malleable Castings Co., Cleveland, Ohio.

**STARTERS, OIL ENGINE.**

Aeroil—Aeroil Burner Co., Inc., Union Hill, N. J.  
 George P. Kittel, Union Hill, N. J.

**STATIONS, AIR AND WATER, GARAGE.**

Romort—Romort Mfg. Co., Oakfield, Wis.

**STAY BOLTS.**

- ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.
- Detroit Seamless Steel Tubes Co., Detroit.
- Falls Hollow Staybolt Co., Cuyahoga Falls, O.
- F. B. C. and Tate Flexible—Flannery Bolt Co., Pittsburgh, Pa.
- Norris Bros., Inc., Robinson, Ill.
- St. Louis Screw Co., St. Louis, Mo.
- ♦ United States Chain & Forging Co., Pittsburgh, Pa.

**STEAMERS, BATTERY OPENING.**

Lattner—P. M. Lattner Mfg. Co., Cedar Rapids, Ia.  
 Peerless—Sparta Mfg. Co., South Bend, Ind.

**STEAMERS, WOOD (FOR WOOD BENDING).**

Perfection Wood-Steaming Retort Co., Parkersburg, W. Va.

**STEEL ALLOYS.**

Andrews Steel Co., Newport, Ky.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Colonial Steel Co., Pittsburgh, Pa.  
 E. S. F.—Crucible Steel Forge Co., Cleveland, O.  
 Federal Tool & Alloy Steel Corp., Brooklyn, N. Y.  
 Firth-Stirling Steel Co., McKeesport, Pa.  
 Frasse, Peter A., & Co., Inc., New York, N. Y.  
 Illinois Steel Co., Chicago, Ill.  
 International—International High Speed Steel Co., New York, N. Y.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Kidd Drawn Steel Co., Alliquippa, Pa.  
 L. C. T. & Ketos—Halcomb Steel Co., Syracuse, N. Y.  
 National Drawn Steel Co., The, East Liverpool, O.  
 Peerless Drawn Steel Co., Massillon, Ohio.  
 Standard Seamless Tube Co., Ambridge, Pa.  
 United Alloy Steel Corp., Canton, O.  
 Vanadium-Alloys Steel Co., Latrobe, Pa.  
 Vanadium Corporation of America, Bridgeville, Pa.  
 Vulcan Crucible Steel Co., Alliquippa, Pa.

**STEEL, COLD ROLLED AND STRIPS.**

- American Steel & Wire Co., Chicago, Ill.
- American Tube & Stamping Co., Bridgeport, Conn.
- Bliss & Laughlin, Inc., Harvey, Ill.
- Cambria Steel Co., Philadelphia, Pa.
- Columbia Steel Co., Elyria, Ohio.
- Elyria Iron & Steel Co., Cleveland, O.
- Griffin Mfg. Co., Erie, Pa.
- Pittsburgh Cold Rolled Steel Co., Pittsburgh, Pa.
- Standard Gauge Steel Co., Beaver Falls, Pa.
- ♦ Stanley Works, The, New Britain, Conn.
- United Alloy Steel Corp., Canton, O.
- Wallace Barnes Co., The, Bristol, Conn.
- Worcester Pressed Steel Co., Worcester, Mass.

**STEEL, DIE.**

"Neor"—Darwin & Milner, Inc., Cleveland, O.  
 Halcomb Pyro—Halcomb Steel Co., Syracuse, N. Y.

**STEEL, FORGING BARS.**

International High Speed Steel Co., New York, N. Y.

**STEEL, DRILL, HOLLOW AND SOLID.**

- ♦ Bethlehem Steel Co., Bethlehem, Pa.
- Bulldog—International High Speed Steel Co., New York.

**STEEL, ELECTRIC FURNACE.**

- ♦ Bethlehem Steel Co., The, South Bethlehem, Pa.
- Buckeye Steel Castings Co., Columbus, O.
- Connecticut Electric Steel Co., Inc., Hartford, Conn.
- Crowley, John A., Co., New York, N. Y.
- Frasse, Peter A., & Co., Inc., New York, N. Y.
- Illinois Steel Co., Chicago, Ill.
- Latrobe Electric Steel Co., Latrobe, Pa.
- Link-Belt Company, Chicago, Ill.
- Ludlum Steel Co., Watervliet, N. Y.
- Timken Roller Bearing Co., Canton, O.
- Trojan Electric Steel Co., Chicago, Ill.
- Union Electric Steel Co., Pittsburgh, Pa.
- United Alloy Steel Corp., Canton, O.

**STEEL, HIGH SPEED.**

Blancke Co., Inc., L. C., New York, N. Y.  
 "Cobaltrom P R K 33" Firex — Darwin, Duror, Como—Darwin & Milner, Inc., New York, N. Y.  
 Darwin, Como—Darwin & Milner, Inc., Cleveland, O.  
 Dreadnaught & Superdreadnaught—Halcomb Steel Co., Syracuse, N. Y.  
 International High Speed Steel Co., New York, N. Y.  
 Ludlum Steel Co., Watervliet, N. Y.  
 Wolfram—Vulcan Crucible Steel Co., Alliquippa, Pa.

**STEEL MILLS.**

- ♦ American Iron & Steel Mfg. Co., Lebanon, Pa.
- ♦ American Sheet & Tin Plate Co., Pittsburgh, Pa.
- ♦ American Steel & Wire Co., Chicago, Ill.
- ♦ American Vanadium Co., Pittsburgh, Pa.
- Bethlehem Steel Co., South Bethlehem, Pa.
- Braeburn Steel Co., Braeburn, Pa.
- Brier Hill Steel Co., Youngstown, O.
- Cambria Steel Co., Johnstown, Pa.
- Carbon Iron & Steel Co., New York, N. Y.
- Carnegie Steel Co., Pittsburgh, Pa.
- Central Iron & Steel Co., Harrisburg, Pa.
- Cohoes Rolling Mill Co., Cohoes, N. Y.
- Colorado Fuel & Iron Co., The, Denver, Colo.
- Colonial Steel Co., Pittsburgh, Pa.
- Columbia Steel & Shafting Co., Pittsburgh, Pa.
- Crucible Steel Company of America, Pittsburgh, Pa.
- Delaware Steel Co., New York, N. Y.
- Eastern Steel Co., The, Pottsville, Pa.
- Firth-Stirling Steel Co., McKeesport, Pa.
- Elyria Iron & Steel Co., Elyria, O.
- Frasse, Peter A., & Co., Inc., New York, N. Y.
- Glasgow Iron Co., Pottstown, Pa.
- Heller Bros. Co., Newark, N. J.
- Highland Iron & Steel Co., Terre Haute, Ind.
- Hirsch Rolling Mill Co., St. Louis, Mo.
- Illinois Steel Co., Chicago, Ill.
- Inland Steel Co., Chicago, Ill.
- International High Speed Steel Co., New York, N. Y.
- Interstate Iron & Steel Co., Chicago, Ill.
- Jones & Laughlin Steel Co., Pittsburgh, Pa.
- ♦ LaBelle Iron Works, Steubenville, O.
- Lackawanna Steel Co., New York, N. Y.
- Laclede Steel Co., St. Louis, Mo.
- Ludlum Steel Co., Watervliet, N. Y.
- Lukens Iron & Steel Co., Coatesville, Pa.
- Maryland Steel Co., Philadelphia, Pa.
- Milton Mfg. Co., Milton, Pa.
- National Drawn Steel Co., East Liverpool, O.
- Nicetown Plate Washer Co., Philadelphia, Pa.
- Otis Steel Co., Ltd., Cleveland, O.
- Peerless Drawn Steel Co., Massillon, Ohio.
- Pennsylvania Steel Co., The, Philadelphia, Pa.
- ♦ Republic Iron & Steel Co., Youngstown, O.
- Rosedale Foundry & Machine Co., Pittsburgh, Pa.
- Shelby—National Tube Co., Pittsburgh, Pa.
- Standard Gauge Steel Co., Beaver Falls, Pa.
- Standard Steel Works Co., Philadelphia, Pa.
- Swedish Iron & Steel Corp., New York, N. Y.
- Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
- Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
- Texas Rolling Mill Co., Fort Worth, Tex.
- United Alloy Steel Corp., Canton, O.
- Vanadium-Alloys Steel Co., Latrobe, Pa.
- Vulcan Crucible Steel Co., Alliquippa, Pa.
- Wheeling Steel & Iron Co., Wheeling, W. Va.
- ♦ Worcester Pressed Steel Co., Worcester, Mass.
- Worth Bros. Co., Coatesville, Pa.
- ♦ Youngstown Sheet & Tube Co., Youngstown, O.
- Zug Iron & Steel Co., Pittsburgh, Pa.

**STEEL, NICKEL.**

Sandoval Zinc Co., Chicago, Ill.  
 Peerless Drawn Steel Co., Massillon, Ohio.

**STEEL, NON-CORROSIVE AND RUSTLESS.**

Ludlum Steel Co., Watervliet, N. Y.

**STEEL PLATE CONSTRUCTION.**

Bedford Foundry & Machine Co., Bedford, Ind.  
**Biggs Boiler Works Co.**, The, East Akron, O.  
 Columbiana Boiler Co., Columbiana, O.  
 Connery & Co., Philadelphia, Pa.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Erie City Iron Works, Erie, Pa.  
 Graver Tank Works, Wm., East Chicago, Ind.  
 Hamler Boiler & Tank Co., Chicago, Ill.  
 Hammond Iron Works, Warren, Pa.  
 Holmes Iron Co., Rutland, Vt.  
 Hibben & Co., Chicago, Ill.  
 Hiltner's, Henry A., Sons Co., Philadelphia, Pa.  
 Illinois Steel Co., Chicago, Ill.  
 International Clay Machinery Co., Dayton, O.  
 Jackson & Church Co., Saginaw, Mich.  
 Laclede Steel Co., St. Louis, Mo.  
 Keeler Boiler Works, J. J., Jackson, Mich.  
 Kennicott Water Softener Co., Chicago Heights, Ill.  
 Koven & Bro., L. O., New York, N. Y.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 McNeil & Bro. Co., James, Pittsburgh, Pa.  
 Memphis Steel Construction Co., Pittsburgh, Pa.  
 Minneapolis Steel & Machinery Co., Minneapolis.  
 Munroe, R., & Sons Mfg. Co., Pittsburgh, Pa.  
 New York Central Iron Works Co., Inc., Hagerstown, Md.  
 Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Petty, J. K., & Co., Inc., Philadelphia, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
 Porcupine Company, The, Bridgeport, Conn.  
 Ritter-Conly Co., Pittsburgh, Pa.  
**Scaife, Wm. B., & Sons Co.**, Pittsburgh, Pa.  
 Scannell Boiler Works, Lowell, Mass.  
 Sistersville Boiler Works, Sistersville, W. Va.  
 Stover Steel Tank Co., Freeport, Ill.  
 Struthers-Wells Co., Warren, Pa.  
 Toepfer, W., & Sons Co., Milwaukee, Wis.  
 Toledo Crane Co., Toledo, O.  
 Walsh & Weldner Boiler Co., Chattanooga, Tenn.

**STEEL FOR TOOL HOLDER CUTTERS.**

- ♦ **Armstrong Bros. Tool Co.**, Chicago, Ill.
- ♦ **Blanche Co., Inc.**, L. C., New York, N. Y.
- ♦ **Champion—Western Tool & Mfg. Co.**, Springfield, O.
- ♦ **Fitzsimons—Fitzsimons Co.**, Youngstown, O.
- ♦ **Onadaga Steel Co.**, Syracuse, N. Y.
- ♦ **U. S. High Speed Steel & Tool Corp.**, New York, N. Y.
- ♦ **Williams, J. H., & Co.**, Brooklyn, N. Y.

**STEEL, SCREW.**

Columbia Steel & Shifting Co., Pittsburgh, Pa.  
 Frasse, Peter A., & Co., Inc., New York, N. Y.  
 Moltrup Steel Products Co., Beaver Falls, Pa.  
 National Drawn Steel Co., East Liverpool, O.  
 Pardee Works, C., Perth Amboy, N. J.  
 Union Drawn Steel Co., Beaver Falls, Pa.

**STEEL, SPRING.**

Barnes Co., The Wallace, Bristol, Conn.

**STEEL, TOOL.**

- A. E. C. Firex—Darwin & Milner, Inc., Cleveland, O.
- Allen & Co., Edgar, Ltd., Chicago, Ill.
- Ark—Wm. Jessop & Sons, Inc., New York, N. Y.
- Atlas Steel Co., Dunkirk, N. Y.
- Baldwin Steel Co., New York, N. Y.
- Beekman, Menker & Griscom, New York.
- ♦ **Bethlehem Steel Co.**, Bethlehem, Pa.
- ♦ **Blanche, L. C., Co., Inc.**, New York, N. Y.
- ♦ **International—International High Speed Steel Co.**, New York, N. Y.
- ♦ **Cann & Saul**, Philadelphia, Pa.
- Carbon Steel Co., Pittsburgh, Pa.
- Carpenter Steel Co., Reading, Pa.
- Carnegie Steel Co., Pittsburgh, Pa.
- Chrome Steel Wks., Chrome, N. J.
- Colonial Steel Co., Pittsburgh, Pa.
- Columbia Steel & Shifting Co., Pittsburgh, Pa.
- Columbia Tool Steel Co., Chicago Heights, Ill.
- Crucible Steel Co. of America, Pittsburgh, Pa.
- Darwin, Duros, Neor, Cobaltcrom, P. R. K.—Darwin & Milner, Inc., New York, N. Y.
- ♦ **Delaware Steel Co.**, New York, N. Y.
- ♦ **Disston & Sons Co.**, Henry, Philadelphia, Pa.
- ♦ **Fort Pitt, Superior, Hecla, Regal—Vulcan Crucible Steel Co.**, Aliquippa, Pa.
- Fraser, Peter A., & Co., Inc., New York, N. Y.
- ♦ **Gladium—The Gladium Co., Inc.**, New York, N. Y.
- ♦ **Halco—Halcomb Steel Co.**, Syracuse, N. Y.
- ♦ **Hammond Steel & Forging Co., Inc.**, Syracuse, N. Y.
- ♦ **Heller Bros Co.**, Newark, N. J.
- ♦ **Jones & Co., Inc.**, B. M., Boston, Mass.
- ♦ **Kidd Drawn Steel Co.**, Aliquippa, Pa.
- ♦ **Lindenberg Steel Co.**, New York, N. Y.
- ♦ **Ludlum Steel Co.**, Watervliet, N. Y.
- ♦ **McCarthy Drill & Tool Co.**, New York.
- ♦ **McInnes Steel Co.**, Corry, Pa.

Monaca, Champion—Pittsburgh Tool Steel Wire Co., Monaca, Pa.  
 Midvale Steel Co., Philadelphia, Pa.  
 National Drawn Steel Co., The, East Liverpool, O.  
 New Process Alloy Steel—New Process Steel Corp., Lancaster, Pa.  
 Novo—Herman Boker & Co., New York, N. Y.  
 Patriarche & Bell, New York, N. Y.  
 Pittsburgh Cold Rolled Steel Co., Pittsburgh, Pa.  
 Pittsburgh Shafting Co. of Detroit, Detroit, Mich.  
 Standard Gauge Steel Co., Beaver Falls, Pa.  
 Trojan—Trojan Electric Steel Co., Chicago, Ill.  
 Ultra-Capital—Edgar T. Ward & Sons, Boston, Mass.  
 United Steel Co., Canton, O.  
 Vanadium-Alloys Steel Co., Latrobe, Pa.  
 Witterman & Co., A. P., Philadelphia, Pa.  
 Wolfram—Vulcan Crucible Steel Co., Aliquippa, Pa.

**STEEL, TREATMENT ALL KINDS.**

Bennett Metal Treating Co., Elmwood, Conn.

**STEEL, VANADIUM.**

Wolfram—Vulcan Crucible Steel Co., Aliquippa, Pa.

**STEEL WOOL AND SHAVINGS.**

American and Ideal—American Steel Wool Mfg. Co., New York, N. Y.  
 Rhodes, James H., Co., Chicago, Ill.

**STEMS, DRILL.**

Durst Mfg. Co., The, New York, N. Y.  
 Electric Welding Products Co., The, Cleveland, O.  
 Lord—The L. L. Lord Co., Meadville, Pa.

**STEMS, EXTENSION, FOR RADIATOR VALVES.**

Hutchison—Hutchison Vapor Heating Co., Washington, D. C.  
 O'Meara's Pat.—J. O'Meara, Inc., New York, N. Y.

**STENCILS, COPPER AND BRASS.**

Kasper Stamp & Seal Co., St. Louis, Mo.  
 Moss, Henry & Co., Inc., New York, N. Y.  
 Pittsburgh Stamp Co., Inc., Pittsburgh, Pa.  
 Matthews & Co., Jas. H., Pittsburgh, Pa.  
 Schwerdtle Stamp Co., The, Bridgeport, Conn.

**STEPS, MANHOLE.**

Pollard, Joseph G., Brooklyn, N. Y.

**STERILIZERS.**

(See also "Filters, Water.")

American—American Sterilizer Co., Erie, Pa.  
 Atmospheric Condensation Co., Kansas City, Mo.  
 Barnstead—Barnstead Still & Sterilizer Co., The, Boston, Mass.  
 Cooper-Hewitt Electric Co., Hoboken, N. J.  
 Electric Water Sterilizer & Ozone Co., Scottsdale, Pa.  
 Forbes—Forbes Co., Philadelphia, Pa.  
 Freas—Thermo Electric Instrument Co., Newark, N. J. (electric dry).  
 Holmes Iron Co., Rutland, Vt.  
 Insto—Max Wocher & Son Co., Cincinnati, O.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 Mohr, John, & Sons, Chicago, Ill.  
 R. U. V.—James B. Clow & Sons, Chicago, Ill.

**STICKS, BELT, FOR PUTTING BELTS ON MOVING PULLEYS**

Safety First—The Ready Tool Co., Bridgeport, Conn.

**STICKS, BOSSING, FLUMBERS'.**

Bernz Co., Otto, Newark, N. J.  
 Johnson, Wm., Newark, N. J.

**STICKS, CANDLE, MINERS'.**

Sayre, L. A., Company, Newark, N. J.

**STILLS, BENZINE AND GASOLINE.**

Grand Rapids Combination—Bousman Mfg. Co., Grand Rapids, Mich.

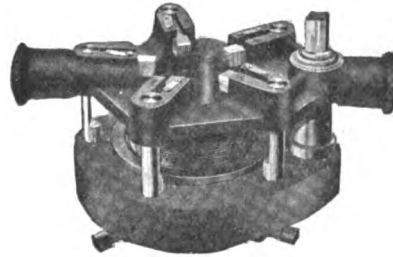
**STILLS, WATER.**

American Copper & Brass Works, The, Cincinnati, O.  
 American—Sterilizer Co., Erie, Pa.  
 Barnstead—Barnstead Water Still Co., The, Boston, Mass.  
 Camden Copper Works, Inc., Camden, N. J.  
 Eclipse—Eclipse Fuel Engineering Co., Rockford, Ill.  
 Harris, Arthur, Co., Chicago, Ill.  
 Hauck Mfg. Co., Brooklyn, N. Y.  
 Hodges Multi-Still—Hodges Water Still Co., Inc., Philadelphia, Pa.  
 Improved Appliance Co., The, Brooklyn, N. Y.  
 Jewell—Jewell Water Improvement Co., Chicago, Ill.  
 Kellogg Co., M. W., New York, N. Y.  
 Kennicott Co., The, Chicago Heights, Ill.



# "TOLEDOS"—THE PIPE TOOLS

## OF NO REGRETS



### THE "TOLEDO" LINE COMPLETE

No. 00—Rat. Pipe Threader.. $\frac{1}{8}$ " to $\frac{3}{4}$ ", List \$	19.00
No. 0—Adj. Pipe Threader..... $\frac{1}{8}$ " to $\frac{3}{4}$ ", List	16.00
No. 1—Adj. Pipe Threader.....1" to 2", List	24.00
No. 1A—Rat Pipe Threader.....1" to 2", List	30.00
No. 10—Adj. Pipe Threader.....1" to 2", List	28.00
No. 10A—Rat. Pipe Threader..1" to 2", List	34.00
No. $1\frac{1}{2}$ R—Rat. Pipe Threader..... $2\frac{1}{2}$ " to 3", List	50.00
No. 2 Geared Rat. Threader.... $2\frac{1}{2}$ " to 4", List	100.00
No. 25—Geared Rat. Threader $2\frac{1}{2}$ " to 6", List	230.00
No. 3—Geared Rat. Threader.. $4\frac{1}{2}$ " to 8", List	300.00
No. 4 Geared Rat. Threader..9" to 12", List	500.00
Vosper Pipe Cutter..... $\frac{1}{2}$ " to 2", List	16.00
No. 250—Pipe Cutter..... $2\frac{1}{2}$ " to 6", List	80.00
No. 350—Pipe Cutter.....7" to 10", List	130.00
No. 400—Pipe Cutter.....9" to 12", List	150.00
No. 1—Pipe Vise..... $\frac{1}{8}$ " to $2\frac{1}{2}$ ", List	10.00
No. 2—Pipe Vise..... $\frac{1}{8}$ " to $4\frac{1}{2}$ ", List	20.00
No. 0—Vise Mount, up to $1\frac{1}{4}$ "	12.00
No. 1—Vise Mount, up to 2"	15.00
No. 2—Vise Mount, up to 4"	18.00
Roller Support	5.00
Ratchet Boring Tool	25.50
"Toledo" Power Drive, with A. C. 60 or 50 Cycle Motor	600.00
"Toledo" Power Drive, with A. C. 40, 30 or 25 Cycle Motor	700.00
"Toledo" Power Drive, with D. C. Motor	600.00
No. 100 Power Drive Threader, 1" to 2"	60.00

"Toledo" Pipe Threading Devices represent the most efficient threading tools in use today. Their receding die principle means smooth, long tapered threads, and an ease of operation that permits one man to thread pipe from  $\frac{1}{8}$ " to 12", and do it easily. "Toledos" are simple in construction, strong and durable.

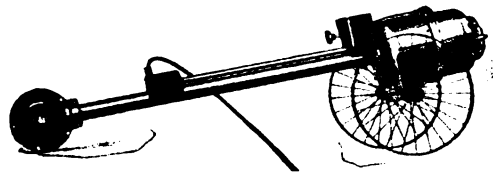
"Toledo" Pipe Cutters are made in four sizes, having a combined capacity of from  $\frac{1}{4}$ " to 12", incl. They are knife cutters, made to cut off pipe accurately without burrs. One man can operate any of these tools.

"Toledo" Power Drive is a remarkable machine for electrically operating the Threading and Cutting-off Tools, thereby increasing their efficiency many times. It is exceedingly simple in action, entirely portable and can be used wherever proper current is available.

An equipment of "Toledo" Threading Devices and Pipe Cutters with the "Toledo" Power Drive is an equipment that can not be excelled for efficiency and superior results.

Send for the complete "Toledo" catalogue which you will find intensely interesting and instructive.

This "Toledo" Power Drive is shown below threading a 4" pipe with a "Toledo" No. 2 Tool in less than 2 minutes.



## THE TOLEDO PIPE THREADING MACHINE CO., TOLEDO, OHIO

New York Office, 50 Church St.

Koven, L. O. & Bro., Jersey City, N. J.  
 McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Pfaudler Co., The, Rochester, N. Y.  
 Peerless—Sparta Mfg. Co., The, South Bend, Ind.  
 Polarstil—Jewell Polar Co., Chicago, Ill.  
 Ralston—John Trageser Steam Copper Works, New York, N. Y.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Stokes—Arthur H. Thomas Co., Philadelphia, Pa.  
 Trageser Steam Copper Works, John, New York.  
 Tripure—Standard Water Systems Co., Hampton, N. J.  
 Young & Sons, E. R., Titusville, Pa.

#### STITCHERS, WIRE, FOR SHIPPING CONTAINERS, ETC.

Saranac Machine Co., Benton Harbor, Mich.

#### STIX, TINNING AND SOLDERING.

Allen, L. B., Co., Inc., Chicago, Ill.

#### STOCKS, DIE.

(See also "Dies, Pipe Threading.")

Acme, Adamantine—American Tap & Die Co., Greenfield, Mass.  
 Armstrong Mfg. Co., The, Bridgeport, Conn.  
 Augmore Three-in-one—Augmore Mfg. Co., Cleveland, O.  
 ♦ Bay State—The Bay State Tap & Die Co., Mansfield, Mass.  
 X Beaver, Easy Worker—The Borden Co., Warren, O.  
 ♦ Beaver Junior—Borden Co., Warren, O.  
 ♦ Bridgeport—The Curtis & Curtis Co., Bridgeport, Conn.  
 Bull-dog—Chisholm-Moore Mfg. Co., Cleveland, O.  
 Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O. (See advertisement on page 367.)  
 Buckeye—The Hart Mfg. Co., Cleveland, O.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 ♦ Carpenter Tap & Die Co., J. M., Pawtucket, R. I.  
 Clow, Jas. B., & Sons, Chicago, Ill.  
 Crown—Crown Die & Tool Co., Chicago, Ill.  
 C. & Y. Handy—Joseph H. Young Co., Boston, Mass.  
 Duplex—The Hart Mfg. Co., Cleveland, O.  
 Erie—Erie Tool Works, The, Erie, Pa.  
 ♦ Forbes—Curtis & Curtis Co., Bridgeport, Conn.  
 ♦ Green River—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Handy Johnson—O. A. Johnson & Sons, Chicago, Ill.  
 Hart Mfg. Co., The, Cleveland, Ohio.  
 Hendrick Mfg. Co., Carbondale, Pa.  
 ♦ Hollands—Hollands Mfg. Co., Erie, Pa.  
 Keystone—B. & B. Tool & Machine Works, Chicago, Ill.  
 Lathecut—Wm. T. Johnston Co., Cincinnati, O.  
 ♦ Lighting, Little Giant—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Morse Twist Drill & Machine Co., New Bedford, Mass.  
 Nye, Armstrong—Nye Tool & Machine Works, Chicago, Ill.  
 ♦ Ohio—Borden Co., The, Warren, O.  
 Phillips—Garrison Brass & Mach. Co., New York.  
 Pratt & Whitney Co., Hartford, Conn.  
 Q. & E.—Reed Mfg. Co., Erie, Pa.  
 ♦ Reece—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Reed—Reed Mfg. Co., Erie, Pa.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 Sandusky—Modern Machinery Co., The, Wilmington, Del.  
 Saunders—D. Saunders Sons, Inc., Yonkers, N. Y.  
 Standard Engineering Co., Ellwood City, Pa.  
 Thistle—Winter Bros. Co., Wrentham, Mass.  
 Three-in-One—National Pipe Die Machine Co., Archbold, O.  
 ♦ Trio—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### STOCKS, DIE, ADJUSTABLE.

Armstrong Mfg. Co., The, Bridgeport, Conn.  
 ♦ Beaver—Borden Co., Warren, O.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 Crane—Crane Co., Chicago, Ill.  
 Crown—Crown Die & Tool Co., Chicago, Ill.  
 Four Die—J. D. Johnson Co., Inc., Philadelphia, Pa.  
 Hart Mfg. Co., The, Cleveland, O.  
 ♦ Improved Ohio—Borden Co., The, Warren, O.  
 ♦ O. K. & Economy—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Ohio—Borden Co., The, Warren, O.  
 Oswego Tool Co., Oswego, N. Y.  
 Pratt & Whitney Co., Hartford, Conn.  
 ♦ Reed—Reed Mfg. Co., Erie, Pa.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 Sandusky—Modern Machine Co., Wilmington, Del.  
 Self-Lube—American Tool & Machine Co., Baltimore, Md.  
 ♦ Smart—Greenfield Tap & Die Corp., Greenfield, Mass.

♦ Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O. (See advertisement on page 367.)  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 ♦ Warren—The Borden Co., Warren, O.

#### STOCKS, DIE, GEARED.

Sandusky—The Modern Machinery Co., Wilmington, Del.

#### STOCKS, DIE, RATCHET.

♦ Beaver, Easy Worker—The Borden Co., Warren, O.  
 Bull-Dog, Matchless—The Oster Mfg. Co., Cleveland, O.  
 Crown Die & Tool Co., Chicago, Ill.  
 Enterprise—D. A. Hinman & Co., Sandwich, Ill.  
 G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Hart Mfg. Co., The, Cleveland, O.  
 Lowell—Lowell Wrench Co., The, Worcester, Mass.  
 Pratt & Whitney Co., Hartford, Conn.  
 Sandusky—The Modern Machinery Co., Wilmington, Del.  
 ♦ Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O. (See advertisement on page 367.)  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### STOCKS AND DIES, FOR BOLTS.

Armstrong Mfg. Co., The, Bridgeport, Conn.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 Carpenter Tap & Die Co., The J. M., Pawtucket, R. I.  
 Duplex—Hart Mfg. Co., The, Cleveland, O.  
 ♦ Green River, Lightning—Greenfield Tap & Die Corp., Greenfield, Mass.  
 ♦ Little Giant, Reece, Smart—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Oster Mfg. Co., The, Cleveland, O.  
 Pratt & Whitney Co., Hartford, Conn.  
 Russell—Russell Mfg. Co., Greenfield, Mass.

#### STOCKS AND DIES FOR BRASS PIPE.

Armstrong Mfg. Co., Bridgeport, Conn.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 ♦ Beaver—The Borden Co., Warren, O.  
 Bulldog—The Oster Mfg. Co., Cleveland, O.  
 Buckeye—The Hart Mfg. Co., Cleveland, O.  
 ♦ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.  
 Carpenter Tap & Die Co., The J. M., Pawtucket, R. I.  
 Crane Valve Co., Bridgeport, Conn.  
 ♦ Economy—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Erie Tool Works, The, Erie, Pa.  
 ♦ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Pratt & Whitney Co., Hartford, Conn.  
 ♦ Reece—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Russell—Russell Mfg. Co., Greenfield, Mass.  
 ♦ Toledo—Toledo Pipe Threading Machine Co., Toledo, Ohio. (See advertisement on page 367.)  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### STOKERS, FORCED DRAFT.

Illinois Stoker Co., Alton, Ill.

#### STOKERS, MECHANICAL.

Armstrong Mfg. Co., Springfield, Ohio—(hand).  
 Babcock & Wilcox Co., New York, N. Y.  
 Brady, James A., Foundry Co., Chicago, Ill.  
 Buch Foundry Equipment Co., Bridgeport, Pa.  
 Burke's—Burke Furniture Co., Chicago, Ill.  
 Chicago—American Foundry & Casting Co. (self-cleaning), Dayton, O.  
 Codd Co., E. J., Baltimore, Md.  
 Cokal Stoker Corp., Chicago, Ill. (hand).  
 Combustion Engineering Corp., New York, N. Y.  
 Continental—Manistee Iron Works Co., Manistee, Mich.  
 Coxe—Wilmot Engineering Co., Hazleton, Pa.  
 Detroit "V"—Detroit Stoker Co., Detroit, Mich.  
 Erie—Erie Foundry Co., Erie, Pa.  
 Federal—Federal Stoker Co., Chicago, Ill.  
 Files Hand Stoker—Files Engineering Co., Inc., The, Providence, R. I.  
 Gravity, Hand—Twin Fire Furnace Co., Chicago, Ill.  
 Green—Green Engineering Co., East Chicago, Ind.  
 Hagan, Geo. J., Co., Pittsburgh, Pa.  
 Harrington—Green Engineering Co., East Chicago, Ind.  
 Hartford Blower Co., The, Hartford, Conn.  
 Huber—Flynn & Emrich Co., Baltimore, Md.  
 The Jones—The Under-Feed Stoker Co. of America, Chicago, Ill.  
 Keystone—Keystone Stoker Co., New York, N. Y.  
 Ko-Shovel—Goetz Company, Chicago, Ill.  
 Laclede-Christy—Laclede-Christy Clay Products Co., St. Louis, Mo.  
 Lehigh—Fuller-Lehigh Co., Fullerton, Pa.  
 Little Giant—Hamler Boiler & Tank Co., Chicago, Ill.  
 Locomotive Stoker Co., Pittsburgh, Pa.  
 Marion Machine Foundry & Supply Co., Marion, Ind.  
 McClave—McClave-Brooks Co., Scranton, Pa.—(hand).

# COKAL—HAND—STOKERS

## Intermeshing Bars—Self Cleaning

A competent Engineering and Service Department insures satisfactory results.

COKAL STOKER CORP., 1031 N. Clark St., Chicago

McKenzie—McKenzie Furnace Co., Chicago, Ill.  
 McMillan—James McMillan & Co., Chicago, Ill.  
 Model Automatic—Automatic Furnace Co., Dayton, O.  
 Model—Automatic Furnace Co., Dayton, O.  
 Moloch—Moloch Company, Kaukauna, Wis.  
 Moloch—Moloch Stoker Co., Chicago.  
 Murphy—Murphy Iron Works, Detroit, Mich.  
 National—M. A. Hoff Co., Indianapolis, Ind.  
 Parson—Parson Mfg. Co., Elizabeth, N. J.  
 Patterson Hand Stoker Corp., Baltimore, Md.  
 Perfection Grate & Supply Co., Springfield, Mass.  
 (hand.)  
 Playford—Rosedale Foundry & Machine Co., Pittsburgh, Pa.  
 Riley Underfeed—Sanford-Riley Stoker Co., Worcester, Mass.  
 Roach—Roach Stoker Co., Philadelphia, Pa.  
 Standard—Standard Stoker Co., Inc., Wilmington, Del.  
 (locomotive).  
 Stroud, E. H. & Co., Chicago, Ill. (powdered coal).  
 Taylor—American Engineering Co., Philadelphia, Pa.  
 United—United Stokers Co., Hammond, Ind.  
 Vasil Steam Systems Co., Washington, D. C. (automatic).  
 Westinghouse, New Model Roney—Westinghouse Machine Co., East Pittsburgh, Pa.  
 Wetzel—The Wetzel Mechanical Stoker Co., Trenton, N. J.

## STOKERS, NATURAL DRAFT.

Illinois Stoker Co., Alton, Ill.

## STONES, COMMUTATOR SMOOTHING.

Acme—Green Equipment Corp., Chicago, Ill.

## USE

# ACME SMOOTHING STONES

for trueing up commutators quickly, efficiently and at a fraction of the cost of turning.

## The Aurand Commutator Slotter

Portable, motor-driven, hand operated. Cuts uniform slots without removing armature. Saves 85 percent of time and labor over old hand method.

Send for descriptive literature and booklet

## Green Equipment Corporation

Monadnock Block

Chicago, Ills.

## STONES, FILTERING.

Seneca Standard—American Tripoli Co., Seneca, Mo.  
 Tripoli Stone—American Tripoli Co., Seneca, Mo.  
 Welsh, Wm., Cincinnati, O.

## STONES, RUBBING AND SHARPENING.

American Emery Wheel Works, Providence, R. I.  
 Carborundum Co., The, Niagara Falls, N. Y.  
 Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Dimo-Grit—Luther Grinder Mfg. Co., Milwaukee, Wis.  
 Pike Mfg. Co., Pike, N. H.  
 Quick-Cut—The Scranton Whetstone & Abrasive Wheel Co., Scranton, Pa.  
 Superior Corundum Wheel Co., Waltham, Mass.

## STOOLS AND CHAIRS, BATH.

Art Brass Co., New York, N. Y.  
 Eustis Mfg. Co., J. P., Cambridge, Mass.  
 Celluvarno—The Silcock-Miller Co., South Orange, N. J.  
 Cleveland Metal Craft Co., Cleveland, O.  
 Eastern Specialty Mfg. Co., Scranton, Pa.  
 Eustis Mfg. Co., J. P., Cambridge, Mass.  
 Ivoroid—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Kidde & Co., New York. (Steel.)  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Omaha—The Galard Co., New York, N. Y.  
 Sanitary Specialties Co., Philadelphia, Pa.

Silver & Co., Brooklyn, N. Y.  
 Simco—Silcock-Miller Co., So. Orange, N. J.  
 Smith Mfg. Co., E. C., Chicago, Ill.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Standard Tank & Seat Co., Camden, N. J.  
 White Pyralin—C. F. Church Mfg. Co., Holyoke, Mass.

## STOOLS AND CHAIRS, FACTORY, STEEL.

Barshal Company, Inc., The, Cleveland, O.  
 Bernstein Mfg. Co., Philadelphia, Pa.  
 Buffalo Metal Furniture Mfg. Co., Buffalo, N. Y.  
 Chicago Wire Chain Co., The, Chicago, Ill.  
 Cleveland Wire Spring Co., The, Cleveland, O.  
 Estes, E. B., & Sons, New York, N. Y. (wood)  
 General Fire Proofing Co., Youngstown, O.  
 Kalamazoo Steel Goods Co., Kalamazoo, Mich.  
 Manufacturing Equipment & Engineering Co., South Framingham, Mass.  
 Medart, Fred, Mfg. Co., St. Louis, Mo.  
 Merritt & Co., Camden, N. J.  
 New Britain Machine Co., The, New Britain, Conn.  
 Ohio Mfg. Co., The, Painesville, O. (steel, adjustable).  
 Ot-Steel—Angle Steel Stool Co., Otsego, Mich.  
 Royal-Chicago—Royal Metal Mfg. Co., Chicago, Ill.  
 Uhl Steel—Toledo Metal Furniture Co., Toledo, O.  
 Yesbera Mfg. Co., Toledo, Ohio.

## STOPPERS, GAS MAIN.

Behringer, Edward A., New York.  
 Safety Gas Main Stopper Co., Brooklyn, N. Y.

## STOPPERS, LADLE.

Dixon Crucible Co., Jos., Jersey City, N. J.  
 McCullough-Dalzell Crucible Co., Pittsburgh, Pa.

## STOPPERS, RUBBER, BASIN AND BATH.

(For metal stoppers see "Plugs.")

American Brass Novelty Co., Grand Haven, Mich.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Bridgeport—H. O. Canfield Co., Bridgeport, Conn.  
 Bunnell, Wm., Est., New York, N. Y.  
 Canfield Rubber Co., The, Bridgeport, Conn.  
 Coleman's—Allan J. Coleman, Chicago, Ill.  
 Daisy—Schacht Rubber Mfg. Co., Huntington, Ind.  
 Diamond Rubber Co., Inc., The, Akron, O.  
 Durst Mfg. Co., The, New York, N. Y.  
 Elkhart Rubber Works, Elkhart, Ind.  
 Good—Good Mfg. Co., Inc., New York, N. Y.  
 Goodrich—B. F. Goodrich Rubber Co., Akron, O.  
 Government Style—The B. F. Goodrich Co., Akron, O.  
 Helland's—Geo. W. Helland, New York, N. Y.  
 Holland Rubber Co., New York, N. Y.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Our Own—H. O. Canfield Co., Bridgeport, Conn.  
 Perfect—H. O. Canfield Co., Bridgeport, Conn.  
 Powell Metal Core—Wm. Powell Co., Cincinnati, O.  
 Regular—The B. F. Goodrich Co., Akron, O.  
 Republic Rubber Corp., The, Youngstown, O.  
 United States Rubber Co., Mechanical Goods Div., New York.  
 Western Rubber Co., Goshen, Ind.  
 Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

## STOPPERS, SINK, SUCTION.

Elkhart Rubber Works, Elkhart, Ind.  
 Horner Universal—S. E. Horner, Bridgeton, N. J.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

## STOPS, BENCH.

Chapin-Stephens Co., The, Pine Meadow, Conn.  
 Hargrave—The Cincinnati Tool Co., Cincinnati, O.  
 Millers Falls Co., New York, N. Y.  
 Morrill, Apex—Chas. Morrill, New York, N. Y.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Smith—Seymour Smith & Son, Oakville, Conn.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Vaughan—C. Winkler, Newark, N. J.  
 Winkler—Charles Winkler, Inc., Newark, N. J.

## STOPS, EMERGENCY SPRINKLER.

Johnsons—Johnson Tool Co., Inc., Providence, R. I.

## STOPS, ENGINE, AND SPEED LIMIT SYSTEM.

Acton—John Acton, Brooklyn, N. Y.  
 Consolidated—Consol. Engine Stop Co., New York.  
 Garrett, W. D., & Co., New York, N. Y.  
 Falls—Jenkins Machine Co., Sheboygan, Wis.  
 Locke—Locke Regulator Co., Salem, Mass.  
 Monarch, Springfield—Consolidated Engine Stop Co., New York.  
 No-If—Metallic Packing & Mfg. Co., Elyria, O.  
 Simplex—E. L. Miller Mfg. Co., Kansas City, Mo.

**Strong's**—The Strong, Carlisle & Hammond Co., Cleve-  
Westinghouse Electric & Mfg. Co., East Pittsburgh,  
Pa. (steam turbine).  
land, O.  
**XX Century**—Atwood & Morrill, Salem, Mass.

**STOPS AND GAGES, SWING SAW.**  
Oliver Machinery Co., Grand Rapids, Mich.

**STOPS, LAVATORY.**  
(See "Cocks, Stop, Lavatory.")

**STOVES, ACETYLENE, GAS.**  
Acetylene Stove Mfg. Co., Cleveland, O.  
Standard—Standard Acetylene Appliance Co., New  
York, N. Y.

**STOVES, BABBITT MELTING.**  
Delano Co., The E. A., Chicago, Ill.  
Improved Appliance Co., Brooklyn, N. Y.  
Neway—Rowell Mfg. Co., Appleton, Wis.

**STOVES, ELECTRIC.**  
Electri Coal—Magee Furnace Co., Boston, Mass.

**STOVES, GAS HEATING.**  
(See "Heaters, Gas.")  
Lawson—Lawson Mfg. Co., Pittsburgh, Pa.

**STOVES, HEATING.**  
Jumbo, Royal, Dexter, Pilot—Indiana Foundry Co.,  
Indiana, Pa.

**STOVES AND HEATERS, LAUNDRY.**  
(See also "Heaters, Tank, Domestic.")  
Andrews—Andrews Heating Co., Minneapolis, Minn.  
Belleville Stove & Range Co., Belleville, Ill.  
Bon Ami—S. Deschauer & Co., Chicago, Ill.  
Boomer—Hess-Snyder Co., The, Massillon, O.  
Boynton Furnace Co., The, New York, N. Y.  
Faultless—The Graft Furnace Co., New York, N. Y.  
Floral City—Monroe Foundry & Furnace Co., Monroe,  
Mich.  
Geyser—Thatcher Furnace Co., New York, N. Y.  
Gurney Laundry—Gurney Heater Mfg. Co., Boston.  
Hawkins—Rollin Hawkins-McCain Co., Indianapolis,  
Ind.  
Hudson Boiler Mfg. Co., The, New York, N. Y.  
Ideal—American Radiator Co., Chicago, Ill.  
Imico—Illinois Malleable Iron Co., Chicago, Ill.  
Little Hercules—Continental Brass & Foundries Co.,  
St. Louis, Mo.  
Magee—Magee Furnace Co., Boston, Mass.  
Mahoney—Mahoney Boiler & Radiator Co., Troy, N. Y.  
Navus—National Radiator Co., Johnstown, Pa.  
Paragon—Isaac A. Sheppard Co., Philadelphia, Pa.  
Perfecto—Richardson & Boynton Co., New York, N. Y.  
Pierce Giant—Pierce, Butler & Pierce Mfg. Co., New  
York, N. Y.  
Prudential Heater Co., Louisville, Ky.  
Portland Stove Foundry Co., Portland, Me.  
Puritan—Crescent Furnace & Foundry Co., Des  
Moines, Ia.  
Richmond—Richmond Radiator Co., New York, N. Y.  
Ross—The Ross Supply Co., Greenville, Conn.  
Spear Stove & Heating Co., James, Philadelphia, Pa.  
Stamford—Stamford Foundry Co., Stamford, Conn.  
Sunray—U. S. Radiator Corp., Detroit, Mich.  
Triumph—J. W. Keller, Chicago, Ill.  
Union Boiler Co., Pennington, N. J.  
Well McLain—Well McLain Co., Michigan City, Ind.  
Wilks—S. Wilks Mfg. Co., Chicago, Ill.

**STOVES, OIL.**  
(See "Heaters, Oil.")

**STOVES & RANGES, ELECTRIC.**  
(See Cooking Equipment, Electric.)

**STOVES, ROUND KNOCKDOWN.**  
Kamp Cookers—Jackson Stove & Stamping Co.,  
Jackson, Mich.

**STOVES, SAND DRYER.**  
Punxsutawney Fdy. & Machine Co., Punxsutawney, Pa.  
Sutton—Indiana Foundry Co., Indiana, Pa.

**STRAIGHTENERS, SHAFT AND AXLE.**  
(See "Presses, Straightening.")  
Geir—The P. A. Geir Co., Cleveland, O.  
Hilles & Jones Co., Wilmington, Del.  
Kane & Roach, Syracuse, N. Y.  
Little Giant—B. B. Noyes Co., Inc., Greenfield, Mass.  
Logemann Bros., Milwaukee, Wis.  
♦ Medart—Medart Patent Pulley Co., St. Louis, Mo.  
Niles-Bement-Pond Co., New York, N. Y.  
Springfield (bench)—Springfield Machine Tool Co.,  
Springfield, O.  
Watson-Stillman Co., The, New York, N. Y.

## STRAINERS, AIR AND GAS.

Paget Self-Cleaning Strainer Co., Chicago, Ill.

## STRAINERS, BRASS.

Acheson Mfg. Co., Braddock, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Pin Co., Waterbury, Conn.  
Bishop & Babcock Co., The, Cleveland, O.  
Boosey—Greenwood Mfg. Co., Detroit, Mich.  
Brey & Krause Mfg. Co., Allentown, Pa.  
Cleveland Faucet Co., The, Cleveland, O.  
Cook, A. D., Lawrenceburg, Ind.  
Exeter Brass Works, Exeter, N. H.  
Federal-Huber Co., Chicago, Ill.  
Fries & Co., Buffalo, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Haydenville Co., The, Haydenville, Mass.  
Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
♦ Jenkins Bros., New York, N. Y.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Mueller Mfg. Co., H., Decatur, Ill.  
Nelson, N. O. Mfg. Co., St. Louis, Mo.  
New Jersey Tube Co., New York.  
♦ Ohio—The Ohio Injector Co., Wadsworth, O.  
Peck Bros. & Co., New Haven, Conn.  
♦ Powell, Wm., Co., The, Cincinnati, O.  
Quality—Wire Goods Co., Worcester, Mass.  
Speakman Co., Wilmington, Del.  
Star—U. T. Hungerford Brass & Copper Co., New  
York, N. Y.  
Street & Kent Mfg. Co., Chicago, Ill.  
Taylor, Geo., Brass & Bronze Works, Inc., New York,  
N. Y.  
Waterbury Mfg. Co., Waterbury, Conn.  
Watson—Watson & McDaniel Co., Philadelphia, Pa.  
Wolff Mfg. Co., Chicago, Ill.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

## STRAINERS, CAST IRON.

Acme—Compound Injector & Specialty Co., Chicago, Ill.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Athol Pump Co., Athol, Mass.  
Fee & Mason Mfg. Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Haydenville Co., The, Haydenville, Mass.  
Jones Hollow Ware Co., Baltimore, Md.  
Jumbo Heater & Mfg. Co., The, Cleveland, O.  
♦ Kelly & Jones Co., Greensburg, Pa.  
Kincaid Bros., Pittsburgh, Pa.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Modern Iron Works, Quincy, Ill.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Riverside Foundry & Galvanizing Co., Kalamazoo,  
Mich.  
♦ Walworth Mfg. Co., Boston, Mass.  
Wolverine Foundry Co., Detroit, Mich.

## STRAINERS, CESSPOOL.

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Broad Gauge Iron Works, Boston, Mass.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Sanitary Company of America, Linfield, Pa.

## STRAINERS, CONDUCTOR, WIRE.

Berger Mfg. Co., Canton, O.  
Canton Mfg. Co., Canton, O.  
Estey Wire Works, New York, N. Y.  
Jeliff, C. O., Mfg. Corp., Southport, Conn.  
Wright Wire Co., Worcester, Mass.

## STRAINERS, DRINKING FOUNTAIN.

Acheson Mfg. Co., Braddock, Pa.

## STRAINERS, FOOT VALVE.

Cook, A. D., Lawrenceburg, Ind.  
Flagg, Stanley G., & Co., Philadelphia, Pa.  
Haydenville Co., The, Haydenville, Mass.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.

## STRAINERS, GASOLINE.

♦ Trusty—Lunkenheimer Co., Cincinnati, O.

## STRAINERS, HOSE.

Allen Fire Dept. Supply Co., Providence, R. I.  
♦ American Injector Co., Detroit, Mich.  
♦ Boston Woven Hose & Rubber Co., Cambridge, Mass.  
Callahan, Cornelius, Co., The, Boston, Mass.  
Edna Brass Mfg. Co., The, Cincinnati, O.  
Elkhart Brass Mfg. Co., Elkhart, Ind.  
Glauber Brass Mfg. Co., Cleveland, O.  
Moak Machine & Tool Co., Port Huron, Mich.  
Perfection—Ira Brindle, Waynesboro, Pa.  
Seattle Brass Co., Seattle, Wash.  
♦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.

**STRAINERS, OIL.**

Anthony—Anthony Co., The, Long Island City, N. Y.  
 Gwynn Engineering Co., Pittsburgh, Pa.  
 Lalor Fuel Oil System Co., Baltimore, Md.  
 Lockett, M. A., Co., Ltd., New Orleans, La.  
 Paget—Self-Cleaning Strainer Co., Chicago, Ill.  
 Peeco—Plant Eng. & Equipment Co., New York, N. Y.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 Rockwell—Rockwell Furnace Co., New York, N. Y.  
 Tate-Jones & Co., Inc., Pittsburgh, Pa.  
 White—White Fuel Oil Engineering Corp., New York.

**STRAINERS, ROOF, CAST IRON.**

Clow, James B., & Sons, Chicago, Ill.

**STRAINERS, SHOWER AND URINAL STALL.**

(See, also, "Drains, Floor.")

American Foundry & Mfg. Co., St. Louis, Mo.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Federal-Huber Co., Chicago, Ill.  
 Fries & Co., Buffalo, N. Y.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Speakman Co., Wilmington, Del.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York, N. Y.

**STRAINERS, SINK.**

American Brass Novelty Co., Grand Haven, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Barnes Mfg. Co., The, Mansfield, O. (bottlers).  
 Boston—The Wire Goods Co., Worcester, Mass.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Brooklyn—Silver & Co., Brooklyn, N. Y.  
 Butterworth—Butterworth Supply Co., Philadelphia, Pa.  
 Duffy—The Cassady-Fairbanks Mfg. Co., Chicago, Ill.  
 Eclipse—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Essex Foundry Co., Newark, N. J.  
 Exeter Brass Works, Exeter, N. H.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Garrison Brass Mach. Co., New York, N. Y.  
 Gray Iron Foundry Co., Reading, Pa.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 New Jersey Tube Co., New York.  
 Richmond Foundry & Mfg. Co., The, Richmond, Va.  
 Rumsey's—Rumsey & Co., Ltd., Seneca Falls, N. Y.  
 Sanitary Company of America, Linfield, Pa.  
 ✦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Trenton Brass & Machine Co., Trenton, N. J.  
 Union Metal Works, Chelsea, Mass.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Wise, J. B., Inc., Watertown, N. Y.

**STRAINERS, STEAM, AIR, LIQUID.**

McAlear Mfg. Co., The, Chicago, Ill.  
 Sterling—Sterling Engineering Co., Milwaukee, Wis.  
 Wright-Austin—Wright-Austin Mfg. Co., Detroit, Mich.

**STRAINERS, STEAM PUMP.**

Blake—The Geo. F. Blake Mfg. Co., New York, N. Y.  
 Buffalo—Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cook, A. D., Lawrenceburg, Ind.  
 Knowles—Knowles Steam Pump Works, New York.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Paget Straightway—Self Cleaning Strainer Co., (Harry E. Paget, Prop.), Chicago, Ill.  
 Peeco—Plant Eng. & Equipment Co., New York, N. Y.  
 Worthington—Henry R. Worthington, New York, N. Y.

**STRAINERS, STEAM TRAP.**

Cook, A. D., Lawrenceburg, Ind.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Richter—Boylston Steam Specialty Co., Chicago.  
 XX Century—Atwood & Morrill, Salem, Mass.

**STRAINERS, SUCTION PIPE, FOR WELLS AND CISTERNS.**

(See also "Points, or Strainers, Drive Well.")

Advance—J. A. Zura Mfg. Co., Erie, Pa.  
 American District Steam Co., North Tonawanda, N. Y.

✦ American Injector Co., Detroit, Mich.  
 American Spiral Pipe Works, Chicago (large sizes).  
 American—The American Well Works, Aurora, Ill.  
 Bishop & Babcock Co., The, Cleveland, O.  
 C. C.—Crane Valve Co., Bridgeport, Conn.  
 Chicago Well Supply Co., Chicago, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Dunham Co., Inc., C. A., Chicago, Ill.  
 Eclipse, Illinois—Illinois Engineering Co., Chicago, Ill.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.

Emerson—The Emerson Pump & Valve Co., Inc., Alexandria, Va.

✦ Foster—Foster Engineering Co., Newark, N. J.  
 Gee Cee Co., Port Huron, Mich.  
 Hayes Pump & Planter Co., Galva, Ill.  
 Jones—Jones Strainer Mfg. Co., Lexington, Tenn.  
 ✦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 L. & G.—Lalance & Grosjean Mfg. Co., New York.  
 Layne & Bowler Co., Memphis, Tenn.  
 Loew Mfg. Co., Cleveland, O. (galvanized).  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McEvoy Wireless—McEvoy, J. H. & Co., Houston, Texas.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Meyers & Bro., B. F., Ashland, O.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Newbury, Jay H., & Son, Goshen, N. Y.  
 Perkes, Charles, Philadelphia, Pa.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Richter—Boylston Steam Specialty Co., Chicago, Ill.  
 Robinson Mfg. Co., The, Cleveland, O.  
 ✦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York.  
 United Brass & Aluminum Mfg. Co., Port Huron, Mich.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Van Mfg. Co., Boston, Mass.  
 Wall Mfg. & Supply Co., The P., Pittsburgh, Pa.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Wise, J. B., Watertown, N. Y.

**STRAINERS, TRACTION.**

✦ Sherman, H. B., Mfg. Co., Battle Creek, Mich.

**STRAINERS, URINAL.**

Exeter Brass Works, Exeter, N. H.  
 Fort Pitt—Acheson Mfg. Co., Braddock, Pa.  
 Hach—Richard G. Hach, New York, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Perkes Co., Charles, Philadelphia, Pa.  
 Pilot—Hedges & Bro., Newark, N. J.  
 Sherwood Brass Works, Detroit, Mich.

**STRAINERS, VALVE.**

Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 ✦ Foster—Foster Engineering Co., Newark, N. J.  
 Haydenville Co., The, Haydenville, Mass.  
 Ideal—Golden Anderson Valve Specialty Co., Pittsburgh, Pa.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 ✦ Walworth Mfg. Co., Boston, Mass.

**STRAINERS, WATER, FOR SUPPLY PIPES.**

American District Steam Co., N. Tonawanda, N. Y.  
 Ansonia Mfg. Co., Ansonia, Conn.  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Holt—Rosedale Foundry & Machine Co., Pittsburgh, Pa.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McDonough Coal Saving Corp., Detroit, Mich.  
 Nathan Mfg. Co., New York.  
 Paget—Self-Cleaning Strainer Co., Chicago, Ill.  
 Peeco—Plant Engineering & Equipment Co., New York, N. Y.  
 Purity—The Haydenville Co., Haydenville, Mass.  
 Ross Heater & Mfg. Co., Buffalo, N. Y.  
 Twin Strainers—Elliott Co., Jeanette, Pa.  
 Westinghouse Special — Pittsburgh Meter Co., East Pittsburgh, Pa.

**STRAINERS, WIRE CLOTH.**

Michigan Wire Cloth Co., Detroit, Mich.  
 Peerless Lifter—Peerless Tool Co., Chicago, Ill.

**STRAPPING, LOOM.**

Graton & Knight Mfg. Co., Worcester, Mass.  
 Hervey—F. L. Hervey & Co., Inc., Fall River, Mass.  
 Jewell—Jewell Belting Co., Hartford, Conn.  
 Union Belt Co., Fall River, Mass.  
 Warren—Warren Belting Co., Worcester, Mass.

**STRAPS, ROSE.**

American Brass & Copper Co., The, New York, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Hays Mfg. Co., Erie, Pa.  
 Park & McKay Co., The, Detroit, Mich.

**STRAPS, LEATHER AND RAWHIDE, WEB OR WOVEN.**

✦ Alexander—Alexander Bros., Philadelphia, Pa.  
 American Lace Leather Co., Inc., Richmond, Va.  
 Buffalo Weaving & Belting Co., Buffalo, N. Y.  
 ✦ Charlotte Clean Quality—Charlotte Leather Belting Co., Charlotte, N. C.



Chicago Belting Co., Chicago, Ill.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Consolidated Belting Co., Philadelphia, Pa.  
 Coupe Corp., Wm., South Attleboro, Mass.  
 Friedrich Belting Co., St. Louis, Mo.  
 ♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 ♦ Ladew, Edward R., Co., Inc., Glen Cove, N. Y.  
 ♦ Leather Parts Co., Indianapolis, Ind.  
 ♦ New York Leather Belting Co., Brooklyn, N. Y.  
 Reinhold Belting & Supply Co., Brooklyn, N. Y.  
 Sutherland Leather & Felt Co., Detroit, Mich.

#### STRAPS, LUG & SHUTTLE BALATA.

Victor—Victor-Balata & Textile Belting Co., New York.  
 Warren—Warren Belting Co., Worcester, Mass.

#### STRAPS, PIPE.

Ackerman-Johnson Co., Chicago, Ill.  
 Ahlander—Thos. Wrigley Co., Chicago, Ill.  
 B. B.—Berger Bros. Co., Philadelphia, Pa.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Brey & Krause Mfg. Co., Allentown, Pa.  
 Cann & Saul, Philadelphia, Pa.  
 Eagle Mfg. Co., Wellsburg, W. Va.  
 Ever Ready—Wolverine Brass Works, Grand Rapids, Mich.  
 Federal-Huber Co., Chicago, Ill.  
 Fee & Mason, New York, N. Y.  
 Good—Good Mfg. Co., Inc., New York, N. Y.  
 Grabler Mfg. Co., Cleveland, O.  
 Guilderland Foundry Co., Guilderland, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydenville Co., The, Haydenville, Mass.  
 The "Help-Her"—Improved Sanitary Fixture Co., Los Angeles, Cal.  
 Hercules Iron & Supply Co., Boston, Mass.  
 Horner—S. E. Horner Co., Bridgeton, N. J.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Lalance & Grosjean Mfg. Co., New York, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 Modern Mfg. Co., The, Cleveland, O.  
 Mott Iron Works, The J. L., New York, N. Y.  
 Phillips—Newbury Mfg. Co., Monroe, N. Y.  
 Richmond Fdy. & Mfg. Co., Richmond, Va.  
 Robinson Mfg. Co., The, Cleveland, O.  
 Rumsey's—Rumsey & Co., Ltd., Seneca Falls, N. Y.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Sanitary Company of America, Linfield, Pa.  
 Taylor, Geo., Brass & Bronze Works, Inc., New York, N. Y.  
 Universal Pipe Strap Co., West Chicago, Ill.  
 Vollrath—The Vollrath Co., Sheboygan, Wis.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### STRAPS, PIPE, TINNED.

Eagle Mfg. Co., Wellsburg, W. Va.  
 Grabler Mfg. Co., Cleveland, O.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### STRAPS, POLE & TIMBER.

♦ Bethlehem Steel Co., Bethlehem, Pa.

#### STRETCHERS, SAW.

♦ Machinery Co. of America, Big Rapids, Mich.

#### STRETCHER, WASHER, FLUSH PIPE.

Bass Bros., New York, N. Y.

#### STRETCHERS, WIRE, LINEMEN'S.

Northwestern Barb Wire Co., Inc., Sterling, Ill.  
 Zlms' Duplex—Burgess-Norton Mfg. Co., Geneva, Ill.

#### STRIP STEEL, HOT ROLLED.

Harrisburg—Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.  
 Laclede Steel Co., St. Louis, Mo.  
 Pittsburgh Shafting Co. of Detroit, Detroit, Mich.

#### STRIPPERS, INGOT.

Morgan Engineering Co., Alliance, O.

#### STUD-SETTERS, OPENING.

Errington Mechanical Laboratory, New York, N. Y.

#### STUDS, BELT.

♦ Blake & Johnson Co., The, Waterbury, Conn.  
 ♦ Blake's—Green, Tweed & Co., New York, N. Y.  
 Forsyth Metal Goods Co., Buffalo, N. Y.  
 L. X. M. Covel, 20th Century—Manufacturers' Belt, Hook Co., Chicago, Ill. (gunmetal and steel).

#### STUDS, MILLED.

(See, also, "Screws, Machine.")  
 Atlas Bolt & Screw Co., Cleveland, O.

Bard Mfg. Co., Royersford, Pa.  
 Belco—The Bell Company, Buffalo, N. Y.  
 Blake & Johnson Co., Waterbury, Conn.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Buffalo Wipple & Machine Co., Inc., Buffalo, N. Y.  
 Chicago Screw Co., The, Chicago, Ill.  
 Cincinnati Screw Co., Twilight, O.  
 Cleveland Wrought Products Co., Cleveland, O.  
 Curtis Screw, The, Buffalo, N. Y.  
 Detroit Screw Works, Detroit, Mich. (Milled and rough.)  
 Eastern Bolt & Nut Co., Providence, R. I.  
 ♦ Ferry Cap & Set Screw Co., The, Cleveland, O.  
 Hartford Machine Screw Co., Hartford, Conn.  
 Namco—National Acme Co., The, Cleveland, O.  
 New England Bolt Co., Inc., Everett, Mass.  
 Niagara Screw Co., Buffalo, N. Y. (Milled and rough.)  
 Rochester Machine Screw Co., Rochester, N. Y.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Tock Screw Machine Products Corp., Long Island City, N. Y.  
 Victor Tool & Mfg. Co., Chicago, Ill.  
 Western Automatic Mach. Screw Co., The, Elyria, O.  
 Western Screw Products Co., St. Louis, Mo.

#### SUB-PRESSES AND DIES.

(See, also, "Presses and Dies.")

Blake & Johnson Co., Waterbury, Conn.  
 Risdon Tool & Machine Co., The, Waterbury, Conn.

#### SUCTION ENDS.

Clow, James B., & Sons, Chicago, Ill.

#### SULPHURIC ACID.

American Zinc, Lead & Smelting Co., Boston, Mass.  
 ♦ By-Products Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

#### SUPERHEATERS, STEAM.

Babcock & Wilcox Co., New York, N. Y.  
 Elesco—Superheater Co., The, New York, N. Y.  
 Foster—Power Specialty Co., New York, N. Y.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Ohio—Ohio Grease Co., Loudonville, Ohio.  
 Parker—Pardel Corp., Philadelphia, Pa.  
 Simplex—Badenhausen Co., Philadelphia, Pa.  
 Superno Co., Inc., New York, N. Y.  
 Zenner Machine Co., Boston, Mass. (portable superheaters, steam and air, gas and fire heated).

#### SUPPLIES AND APPARATUS, FIRE EQUIPMENT.

Allen, W. D. Mfg. Co., Chicago, Ill.  
 Childs—O. J. Childs Co., Inc., Utica, N. Y.  
 Clay, John H., Philadelphia, Pa.  
 Cliff & Guilbert Co., New York, N. Y.  
 Foamite Firefoam Co., New York, N. Y.  
 Grether—Grether Fire Equipment Co., Dayton, Ohio.  
 Harker Mfg. Co., Cincinnati, O.  
 Hayward & Co., S. F., New York, N. Y.  
 Jiffy—Jiffy Fire Hose Rack Co., The, New York, N. Y.  
 Kanawha—James Boyd & Bros., Philadelphia, Pa.  
 Kanawha—Kanawha Chemical Fire Engine Mfg. Co., New York, N. Y. (automobile).  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Luitwieler—Pumping Engine Co., Rochester, N. Y. (automobile).  
 Morse, Andrew J., & Son, Inc., Boston, Mass.  
 National—M. Donohue & Son, New York, N. Y.  
 Rowe & Son, A. C., New York, N. Y.  
 Safety Fire Extinguisher Co., The, New York, N. Y.  
 Seagrave—The Seagrave Co., Columbus, O.  
 Simmons Co., John, New York, N. Y.  
 Wheaton Brass Works, A. W., Newark, N. J.  
 Wirt & Knox Mfg. Co., Philadelphia, Pa.

#### SUPPLIES, ARTESIAN WELL.

Aermotor Co., Chicago, Ill.  
 American Well Works Co., Aurora, Ill.  
 Baker Mfg. Co., Evansville, Wis.  
 Chicago Well Supply Co., Chicago, Ill.  
 Cook, A. D., Lawrenceburg, Ind.  
 Erb, W. B., & Co., Chicago, Ill.  
 Fairbanks-Morse Co., Chicago, Ill.  
 Hazen Mfg. Co., Hudson, Mich.  
 Hough Mfg. Co., Chas. M., Franklin, Pa.  
 Keystone Driller Co., Beaver Falls, Pa.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### SUPPLIES, BASIN AND BATH.

American Sanitary Mfg. Co., Abingdon, Ill.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Pin Co., Waterbury, Conn.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Em Ess—The Meyer-Sniffen Co., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Goetz Brass Co., Chicago, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia (pedal).



Haydenville Co., The, Haydenville, Mass.  
 Little, M. S., Mfg. Co., Hartford, Conn.  
 Loyal Brass Co., Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York.  
 The Northern Brass Mfg. Co., Waukegan, Ill.  
 Primrose—Reid Brass Mfg. Co., Brooklyn, N. Y. (Con-  
 cealed.)  
 Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Sherwin-Goetz Brass Company, Chicago, Ill.  
 Standard Brass Mfg. Co., Utica, N. Y.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**SUPPLIES, BEER PUMP.**

Canfield Rubber Co., The, Bridgeport, Conn.  
 Kruecke Bros. Mfg. Co., Milwaukee, Wis.

**SUPPLIES, BLASTING, ELECTRIC.**

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

**SUPPLIES AND EQUIPMENT, FOUNDRY.**

American Wire Brush Co., New York, N. Y.  
 Berkshire Mfg. Co., Cleveland, O.  
 Buckeye Products Co., Cincinnati, O.  
 Central Foundry Supply Co., Columbus, O.  
 Diamond—Diamond Clamp & Flask Co., Richmond, Ind.  
 Federal Foundry Supply Co., Cleveland, O.  
 Federal Malleable Co., West Allis, Wis.  
 Hills—John Hill Foundry Supply Co., Cincinnati, O.  
 Hill & Grifth Co., Cincinnati, O.  
 Keystone Foundry Supply Co., Buffalo, N. Y.  
 McCormick Co., J. S., Pittsburgh, Pa.  
 Northern Engineering Works, Detroit, Mich.  
 Obenchain & Boyer, Logansport, Ind.  
 Obermayer Co., The S., Cincinnati, O.  
 Osborn Mfg. Co., The, Cleveland, O.  
 Paxon, J. W., Co., Philadelphia, Pa.  
 Sly, W. W., Mfg. Co., Cleveland, O.  
 Smith Facing & Supply Co., Cleveland, O.  
 Wadsworth—Wadsworth Core Machine & Equipment  
 Co., Akron, O. (Core room equipment.)

**SUPPLIES, GAS WORKS.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.

**SUPPLIES, OIL WELL.**

Arm-Strong—Armstrong, Geo. W., & Co., Inc., Fort  
 Worth, Tex.  
 Bradford Supply Co., Bradford, Pa.  
 Cook, A. D., Lawrenceburg, Ind.  
 Darling Pump & Mfg. Co., The, Ltd., Williamsport,  
 Pa.  
 Hough Mfg. Co., The Chas. N., Franklin, Pa.  
 Jerecki Mfg. Co., Erie, Pa.  
 Jones, S. M., Co., The, Toledo, O.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Leidecker Tool Co., Marietta, O.  
 National Supply Co., Toledo, O.  
 Nor-Bro—Norris Brothers, Inc., Robinson, Ill.  
 Norris, W. C., Tulsa, Okla.  
 Norwalk Drilling Tool Co., Norwalk, Ohio.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Parkersburg Rig & Reel Co., Parkersburg, W. Va.  
 Pattin Bros Co., The, Marietta, O.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Stow Flexible Shaft Co., Philadelphia, Pa.  
 Union Tool Co., Torrance, Calif.  
 United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Young & Sons, E. R., Titusville, Pa.

**SUPPLIES AND WASTES, BASIN, COMBINED.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Bridgeport Brass Co., New York, N. Y.  
 Connecto—L. Wolff Mfg. Co., Chicago, Ill.  
 Crane Co., Chicago, Ill.  
 Electric—Haines, Jones & Cadbury Co., Philadelphia.  
 Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 Little, M. S., Mfg. Co., Hartford, Conn.  
 Monarch Brass Co., Cleveland, O.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York.  
 Reid Brass Mfg. Co., Brooklyn, N. Y.

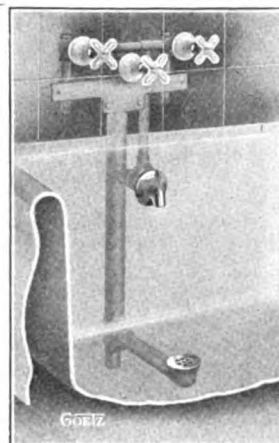
**Built-In  
Bath Fixtures**

ALL BRASS

with  
 "Super" Valves Having  
 High Removable Seat  
 and Interchangeable Unit

Exposed Bath Fixtures  
 and  
 Concealed and Exposed  
 Showers

**GOETZ** BRASS  
 COMPANY  
 Chicago, Ill.



Speakman Co., Wilmington, Del.  
 Standard Brass Mfg. Co., Utica, N. Y.  
 Trinity-Connecto—Goetz Brass Co., Chicago, Ill.  
 United Brass Mfg. Co., Cleveland, O.  
 Wise, J. B., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.

**SUPPLIES AND WASTES, BATH, COMBINED.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Apex—F. N. Dubois & Co., New York, N. Y.  
 D. C.—The D. C. Mfg. Co., Canton, O.  
 Deshler—Speakman Co., Wilmington, Del.  
 Electric—Haines, Jones & Cadbury Co., Philadelphia.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 Liberty—Haines, Jones & Cadbury Co., Philadelphia.  
 Little, M. S., Mfg. Co., The, Hartford, Conn.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monitor—L. Wolff Mfg. Co., Chicago, Ill.  
 Mueller-Stewart—H. Mueller Mfg. Co., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York.  
 Primrose, Rex, Saxon, Vigilant—J. D. Johnson Co.,  
 Philadelphia, Pa.  
 Standard Brass Mfg. Co., Utica, N. Y.  
 Trinity—Goetz Brass Company, Chicago, Ill.  
 Wise, J. B., Inc., Watertown, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.

**SUPPLIES, WATERWORKS.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Cook, A. D., Lawrenceburg, Ind.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Chicago Well Supply Co., Chicago, Ill.  
 Clark, H. W., Co., Mattoon, Ill.  
 Columbian Iron Works, Chattanooga, Tenn.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch Brass Co., The, Cleveland, O.  
 Newark Brass Works, Newark, N. J.  
 Perkes Co., Chas., Philadelphia, Pa.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Rick—Rickersberg Brass Co., Cleveland, O.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Watrous Engine Works Co., St. Paul, Minn.  
 Wood & Co., R. D., Philadelphia, Pa.

**SUPPORTS, PIPE AND STOCK.**

Kellogg, M. W., Co., The, New York, N. Y.  
 N. T. C.—National Tube Co., Pittsburgh, Pa.  
 Loway—A. F. Way Co., Inc., Hartford, Conn.  
 Pittsburgh Valve, Fdy. & Construction Co., Pitts-  
 burgh, Pa.  
 Tyler Underground Heating System, Pittsburgh, Pa.

**SUPPORTS, PUMP.**

Jordan & Steel Mfg. Co., Charlotte, Mich.

**SUPPORTS, TANK.**

American Scale Co., Kansas City, Mo.  
 National Steel Tank & Mfg. Co., Bradford, Ill.

**SUPPORTS, TOWEL AND GRIP BAR.**

Russell, John M., Mfg. Co., The, Naugatuck, Conn.

**SURFACERS, DESK AND TABLE.**

Wayvell, Chappell & Co., Waukegan, Ill.  
 Fox—Fox Supply Co., Brooklyn, Wis.  
 International Floor Machine Co., New York, N. Y.  
 Schlueter, M. L., Chicago, Ill.  
 Wayvell-Chappell & Co., Waukegan, Ill.  
 Weber—Weber Mfg. Co., West Allis, Wis.  
 Yates, P. B., Machine Co., Beloit, Wis.

**SURFACERS, WOOD.**

(See "Machinery, Woodworking.")

Hermance Machine Co., Williamsport, Pa.  
 Knight Mfg. Co., The, Canton, O.  
 Lane Mfg. Co., Montpelier, Vt.  
 Newman Machine Co., Greenboro, N. C.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Whitney—Whitney, Baxter D., & Son, Winchendon, Mass.  
 Woods Machine Co., S. A., Boston, Mass.

**SWABS, FLAX.**

Paxson, J. W., Co., Philadelphia, Pa.

**SWABS, OIL WELL.**

Larkin Packer Co., Bartlesville, Okla.

**SWAGES, PNEUMATIC.**

Draper—Draper Mfg. Co., The, Port Huron, Mich.

**SWAGES, SAW.**

Atkins, E. C., & Co., Indianapolis, Ind.  
 Armstrong—Armstrong Mfg. Co., Portland, Ore.  
 Champion—A. E. White Machine Works, Eau Claire, Wis.  
 Crowell—D. J. Crowell, Buffalo, N. Y.  
 Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Machinery Co. of America, Big Rapids, Mich.  
 Moak Machine & Tool Co., Port Huron, Mich.  
 Ohlen & Sons Saw Mfg. Co., The James, Columbus, O.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Pribnow—Pribnow Swage & Tool Works, Sheboygan, Wis.  
 Simonds—Simonds Mfg. Co., Fitchburg, Mass.  
 Smith & Co., Emerson, Beaver Falls, Pa.

**SWINGERS, DERRICK.**

Flory Werner—S. Flory Mfg. Co., Bangor, Pa.  
 Mead-Morrison Mfg. Co., Boston, Mass.

**SWINGS, BARREL.**

Leavitt Machine Co., Orange, Mass.

**SWITCHES, BILGE PUMP.**

Chicago Automatic Switch Co., Chicago, Ill.

**SWITCHES, TANK.**

Blackburn-Smith Corp., New York, N. Y.  
 Electrite—Sundh Electric Co., Newark, N. J.  
 Irish and Shamrock—W. F. Irish Electric Co., New York, N. Y.  
 Leahy, John J., Electrical Supplies, Inc., New York, N. Y.  
 Penn Pressure Switch—Penn Electric Machine Co., Des Moines, Ia.  
 Watson-Stillman Co., The, New York, N. Y.

**SWIVELS, DROP FORGED.**

American Iron & Steel Mfg. Co., Lebanon, Pa.  
 Michigan Bolt & Nut Works, Detroit, Mich.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 Rogers Shear Co., The, Warren, Pa.  
 Warren Axe & Tool Co., Warren, Pa.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 Williams, J. H., & Co., Brooklyn, N. Y.

**SYNCHROSCOPES.**

Roller-Smith Co., New York, N. Y.  
 Weston—Weston Electrical Instrument Co., Newark, N. J.

**SYSTEMS, DRINKING WATER, FOR FACTORIES.**

Audiffren—Audiffren Refrigerating Machine Co., New York.  
 Erco—Erwin & Co., Chicago, Ill.

**SYSTEMS, ELECTRIC TIME.**

(See also "Clocks.")

Industrial Instrument Co., The, Foxboro, Mass.  
 Tate, Jones & Co., Inc., Pittsburgh, Pa.

**SYSTEMS, EXHAUST AND COLLECTING.**

American Warming & Ventilating Co., Elmira, N. Y.  
 Sterling—Sterling Blower Co., Hartford, Conn.

**SYSTEMS, FUEL OIL PUMPING.**

Billow—National Supply Co., Chicago, Ill.

Duro—The Duro Pump & Mfg. Co., Dayton, O.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Gardner Governor Co., Chicago, Ill.  
 Gilbert & Barker—Gilbert & Barker, Springfield, Mass.  
 Lalor Fuel Oil System Co., Baltimore, Md.  
 Leahy Mfg. Co., Los Angeles, Cal.  
 Lockett, A. M., & Co., Ltd., New Orleans, La.  
 National Supply Co., Chicago, Ill.  
 Quigley Furnace & Foundry Co., New York, N. Y.  
 Todd, White—White Fuel Oil Engineering Corp., New York.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Witts—G. E. Witt Co., Inc., San Francisco, Cal.

**SYSTEMS, GASOLINE LIGHTING.**

Airlight—Acorn Brass Mfg. Co., Chicago, Ill.  
 American Perfection—American Gas Machine Co., Albert Lea, Minn.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Ann Arbor—The Superior Mfg. Co., Ann Arbor, Mich.  
 Arco Light—Yale Light Co., Chicago, Ill.  
 Best—Best Light Co., Canton, O.  
 Defiance—Litquick Gas Lamp Co., Defiance, Ohio.  
 Doran—Acorn Brass Mfg. Co., Chicago, Ill.  
 Doud Lighting Co., Chicago, Ill.  
 Dreadnaught, Quicklit, Wizard—Nagel-Chase Mfg. Co., Chicago, Ill.  
 E. G. M.—Economy Gas Lamp Co., Kansas City, Mo.  
 Ezee—Knight Light Co., Chicago, Ill.  
 F-P—The Incandescent Light & Stove Co., Cincinnati.  
 Frink and J-M Linolette—Johns-Manville, Inc., New York, N. Y.  
 Gloria—Gloria Light Co., Chicago, Ill.  
 King—King Light Co., Peoria, Ill.  
 Knight Light & Soda Fountain Co., Chicago, Ill.  
 Knight—Knight Light & Soda Fountain Co., Chicago, Ill.  
 Mercantile Supply Co., Chicago, Ill.  
 Moss Patent—Peerless Light Co., Chicago, Ill.  
 Nulite—Chicago Solar Light Co., Chicago, Ill.  
 Perfection—Speer Gas Machine Mfg. Co., Los Angeles, Cal.  
 Radiant Home—Acorn Brass Mfg. Co., Chicago, Ill.  
 Rochester—Economy Gas Machine Co., Rochester.  
 Royal Gem—Royal Gas Light Co., Chicago, Ill.  
 S. & S. K. C.—Economy Gas Lamp Co., Kansas City, Mo.  
 Sunbeam—Acorn Brass Mfg. Co., Chicago, Ill.  
 Wizard and Hercules—Nagel-Chase Mfg. Co., The, Chicago, Ill.  
 Yale Special—Yale Light Co., Chicago, Ill.

**SYSTEMS, GASOLINE STORAGE & DISTRIBUTING, AIR PRESSURE.**

Apsco—Allen Pressure System Co., Inc., New York, N. Y.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.

**SYSTEMS, GASOLINE STORAGE, UNDERGROUND.**

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 American—The American Oil Pump & Tank Co., Dayton, O.  
 Ben Hur—Johnson Acetylene Gas Co., Crawfordsville, Ind.  
 Bowser & Co., S. F., Fort Wayne, Ind.  
 Climax—Keystone Boiler & Foundry Co., Landisville, Pa.  
 Columbian—Columbian Steel Tank Co., Kansas City, Mo.  
 Dayton—Dayton Pump & Manufacturing Co., Dayton, O.  
 Economy—Economy Gas Machine Co., Rochester, N. Y.  
 Gilbert & Barker—Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Groetken Pump Co., The, Aurora, Ill.  
 Hamburg Boiler Works, Hamburg, Pa.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Hydraulic Oil Storage Co., New York.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Imperial, Winner, Perfection—Western Oil Pump & Tank Co., St. Louis, Mo.  
 Inglish Mfg. Co., Milwaukee, Wis.  
 Leader Iron Works, Decatur, Ill.  
 Martini & Huneke Company of America, Hoboken, N. J.  
 Milwaukee Tank Works, Milwaukee, Wis.  
 Perfection—Speer Gas Machine Mfg. Co., Los Angeles, Cal.  
 Quality—The Hell Co., Milwaukee, Wis.  
 Seale, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Sexton Can Co., Boston, Mass.  
 Sheet Metal Products Co., Duluth, Minn.  
 Tokheim Oil Tank & Pump Co., Fort Wayne, Ind.  
 Vac—Vac Liquid Equipment Co., Cedar Rapids, Ia.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Western Oil Pump & Tank Co., St. Louis, Mo.  
 W. B.—Wilson & Bennett Mfg. Co., Chicago, Ill.

**SYSTEMS, HEATING, BLOWER FOR LARGE BUILDINGS.**

Baetz—Skinner Bros. Mfg. Co., Inc., St. Louis, Mo.

**SYSTEMS, HEATING, HOT WATER.**

Alberger Heater Co., Buffalo, N. Y.

Almirall & Co., Inc., New York, N. Y.  
 BST—Ferguson & Lange Foundry Co., Chicago, Ill.  
 Belknap Mfg. Co., Bridgeport, Conn.  
 Butler, Thos. F., Lorain, O.  
 General Fire Extinguisher Co., Providence, R. I.  
 Pulser—The Pulser Mfg. Co., Montgomery, Ala.  
 Thrush—H. A. Thrush & Co., Peru, Ind.  
 Tyler Underground Heating System, Pittsburgh, Pa.  
 Wainwright—Alberger Pump & Condenser Companies, New York, N. Y.  
 Wasco (garage)—W. A. Schleit Mfg. Co., Inc., Syracuse, N. Y.

**SYSTEMS, HEATING, STEAM.**

Almirall & Co., Inc., New York, N. Y.  
 American District Steam Co., N. Tonawanda, N. Y. (underground).  
 Broomell—Vapor Heating Co., Philadelphia, Pa.  
 Buffalo—Buffalo Forge Co., Buffalo, N. Y.  
 Central Station Steam Co., Detroit, Mich.  
 Decatur—Field & Shorb Co., Decatur, Ill. (vapor).  
 Donnelly Systems Co., New York.  
 Dunham, C. A. Co., Inc., Chicago, Ill.  
 Economy—Economy Vapor Heating Co., Omaha, Neb.  
 Eddy—Eddy Engineering Co., Alpena, Mich.  
 General Fire Extinguisher Co., New York, N. Y.  
 Gifford and Illinois—Illinois Engineering Co., Chicago.  
 H. S. Co.—Haynes Selling Co., Philadelphia, Pa.  
 Hutchison—Hutchison Vapor Heating Corp., Herndon, Va.  
 Ideal Heat—Ideal Specialty Co., Helena, Mont.  
 I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.  
 Johnson—Johnson Vapor Heating Co., Boston, Mass.  
 Kaustine Co., Inc., Buffalo, N. Y.  
 Kriebel—Vapor Vacuum Heating Co., Philadelphia, Pa.  
 Lawler—Lawler Regulator Co., New York, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Moline—Moline Heat, Moline, Ill.  
 Monash Modulating System of Vapor Heating—Monash—Younger Co., Chicago, Ill.  
 Monash Noiseless System of Vacuum Heating—Monash—Younger Co., Chicago, Ill.  
 Mouat—Mouat-Squires Co., Cleveland, O.  
 Peck—Cassius C. Peck, Rochester, N. Y.  
 Reading—Reading Heater & Supply Co., Reading, Pa.  
 Reliable—Bishop-Babcock-Becker Co., Cleveland, O.  
 Roath—Roath Mfg. Co., Akron, O.  
 Rohaco—Roberts-Hamilton Co., Minneapolis, Minn.  
 Roy's—Roy's Heat Control Co., Brooklyn, N. Y.  
 Simplex—Simplex Heating Specialty Co., Lynchburg, Va.  
 Sterling Engineering Co., Milwaukee, Wis.  
 Stickle—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Sure Seal—Central Supply Co., Worcester, Mass.  
 Thermograde—Thermograde Valve Co., Boston, Mass.  
 Trane Mercury Seal—Vacuum Heating Co., Philadelphia, Pa.  
 Trane—The Trane Co., La Crosse, Wis.  
 Tyler Underground Heating Systems, Pittsburgh, Pa.  
 Univent—Moline Heat, Moline, Ill.  
 Vapor Regulator Co., Philadelphia, Pa.  
 V-V—Moline Vacuum Vapor Heating Co., Moline, Ill.  
 Webster Modulation, Webster Vacuum—Warren Webster & Co., Camden, N. J.

**SYSTEMS FOR HOISTING AND SPOUTING CONCRETE.**

Archer Iron Works, Chicago, Ill.

**SYSTEMS, HOT BLAST HEATING.**

The Haines Co., Chicago, Ill.

**SYSTEMS, HOT WATER SUPPLY.**

Ruud—Ruud Mfg. Co., Pittsburgh, Pa.  
 Stack Heater Co., Boston, Mass.

**SYSTEMS, IRRIGATION, LAWN AND GARDEN.**

Cornell, W. G. Co., New York City.  
 Foamite Fireform Co., New York, N. Y.  
 Skinner—The Skinner Irrigation Co., Troy, O.

**SYSTEMS, KEROSENE LIGHTING.**

Ezee—Knight Light Co., Chicago, Ill.  
 Gold—Gold Car Heating & Lighting Co., New York.  
 Kaufman—The A. G. Kaufman Mfg. Co., New York.  
 Knight—Knight Mfg. Co., Chicago, Ill.  
 Wizard & Hercules—Nagel-Chase Mfg. Co., Chicago.

**SYSTEMS, OILING.**

Bonar—James Bonar & Co., Pittsburgh, Pa.  
 Bowser & Co., S. F., Ft. Wayne, Ind.  
 Burt—Burt Mfg. Co., Akron, O.  
 De Laval Steam Turbine Co., Trenton, N. J.  
 Empress—Bowen Products Corp., Auburn, N. Y. (high pressure).  
 Hills—McCanna Co., Chicago, Ill.  
 Essex Brass Corp., Detroit, Mich.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 Morris—Acorn Brass Mfg. Co., Chicago, Ill.  
 Nugent—Wm. W. Nugent & Co., Chicago, Ill.

Phenix—Richardson Phenix Co., Milwaukee, Wis.  
 Richardson—Richardson Phenix Co., Milwaukee, Wis.  
 Vac Liquid Equipment Co., Cedar Rapids, Iowa.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 White Star—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**SYSTEMS, ORE BEDDING.**

Robins Conveying Belt Co., New York.

**SYSTEMS, SEWAGE DISPOSAL.**

Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Ashley—Ashley Sewage Disposal System, Morgan Park, Chicago.  
 Aten—Aten Sewage Disposal Co., New York, N. Y.  
 Ferguson, Perfection—J. D. Johnson Co., Inc., Philadelphia, Pa.  
 Kaustine—Kaustine Co., Buffalo, N. Y.  
 Kewanee Private Utilities Co., Kewanee, Ill.  
 Merritt & Co., Camden, N. J.  
 Pacific Flush Tank Co., Chicago, Ill.  
 Rhoads Williams—Modern Iron Works, Quincy, Ill.  
 Russell—Russell Sewage Disposal Co., Burlington, Iowa.  
 Sanisep—Cement Products Co., Wilmington, N. C.  
 Stephen-Adamson Mfg. Co., Aurora, Ill.  
 Yeomans Bros. Co., Chicago, Ill.

**SYSTEMS, VENTILATING.**

(See also "Ventilators.")

A B C, Ventura, Sirocco—American Blower Co., Detroit, Mich.  
 American Foundry & Furnace Co., Bloomington, Ill.  
 Autoforce—Autoforce Ventilating System, Boston.  
 Connecticut Blower Co., Inc., The, Hartford, Conn.  
 Haines Co., The, Chicago, Ill.  
 Kaustine Co., Inc., Buffalo, N. Y.  
 Kirk & Blum Mfg. Co., Cincinnati, O.  
 Lindstam, S. F., Minneapolis, Minn.  
 McCreery Engineering Co., Detroit, Mich.  
 Moline—Moline Heat, Moline, Ill.  
 Typhoon Fan Co., New York, N. Y.  
 Univent—Moline Heat, Moline, Ill.  
 Waterman—Waterbury Co., The, Minneapolis, Minn.

**SYSTEMS, WATER COOLING AND CIRCULATING.**

Carbondale Machine Co., The, Carbondale, Pa.

**SYSTEMS, WATER SOFTENING AND FUELIFYING.**

(See also "Filters, Water," and "Softeners, Water.")  
 Allen Germ Proof—The Allen Filter Co., Toledo, O.  
 Angell—John E. Angell & Co., St. Louis, Mo.  
 ♦ Eureka—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Goade Water Filter & Purifier Mfg. Co., Allentown, Pa.  
 International—International Filter Co., Chicago, Ill.  
 Jewell Polar Co., Chicago, Ill.  
 Kaestner & Co., Chicago, Ill.  
 Kennicott Water Softener Co., Chicago, Ill.  
 Keystone—Keystone Chemical Mfg. Co., Philadelphia.  
 Marion—The Marion Incline Filter & Heater Co., Marion, O.  
 New York Continental Jewell Filtration Co., Nutley, N. J.  
 Sealife, Wm. B., & Sons Co., Pittsburgh, Pa.

**SYSTEMS, WATER STORAGE.**

Sealife, Wm. B., & Son Co., Pittsburgh, Pa.  
 Vator Continuous—Power Plant Specialty Co., Chicago.

**SYSTEMS, WATER SUPPLY, PNEUMATIC.**

Air Lift—Ingersoll-Rand Co., New York, N. Y.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 ♦ Atlas Power Pump—The Deming Co., Salem, O.  
 Bailey & Farrell Mfg. Co., Pittsburgh, Pa.  
 Bethalto System—Southern Auto & Machinery Co., St. Louis, Mo.  
 Bishop-Babcock-Becker Co., The, Cleveland, O.  
 Bremen—The Bremen Mfg. Co., Bremen, O.  
 Caldwell Co., W. E., Louisville, Ky.  
 Caloric—The Bremen Mfg. Co., Bremen, O.  
 Chicago Pump Co., The, Chicago, Ill.  
 Church—Stephen B. Church, Seymour, Conn.  
 Dayton—Dayton Pump & Mfg. Co., Dayton, O.  
 Decatur Pump & Mfg. Co., Decatur, Ill.  
 De Vel—Comstock Automatic Pump Co., Comstock, Mich.  
 ♦ Deming Co., The, Salem, O. Trade names—Atlas, Marvel, Straight Line.  
 Domestic Engine & Pump Co., Shippensburg, Pa.  
 Douglas, W. & B. Co., Middletown, Conn.  
 Du Moine—Thompson Mfg. Co., Des Moines, Ia.  
 Duro—The Duro Pump & Mfg. Co., Dayton, O.  
 Economy—Economy Pumping Machinery Co., Chicago, Ill.  
 Economy—Indiana Air Pump Co., Indianapolis, Ind.  
 Erwin—Erwin & Co., Chicago, Ill.  
 Everfresh—United Pump & Power Co., Chicago, Ill.  
 Excel—Johnson & Washburn Co., Boston, Mass.  
 Fairbanks-Morse—Fairbanks, Morse & Co., Chicago.

Famous—Lucas Miner Pump Co., Dayton, O.  
 Goulds—The Goulds Mfg. Co., Seneca Falls, N. Y.  
 Gray Motor Co., Detroit, Mich.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Harris Air Pump Co., Indianapolis, Ind.  
 Hazel—Columbus Pump Supply Co., The, Columbus, O.  
 Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Humphries Mfg. Co., Mansfield, O.  
 Hydro-Pneumatic Service Co., South Bend, Ind.  
 Imperial—Ingersoll-Rand Co., New York, N. Y.  
 International Filter Co., Chicago, Ill.  
 Kaustine Co., Inc., Buffalo, N. Y.  
 Kelly System—Kelly Mfg. Co., The, Bucyrus, O.  
 Kewanee—Kewanee Private Utilities Co., Kewanee, Ill.  
 Leader—Leader Iron Works, Decatur, Ill.  
 Luitwieller Pumping Engine Co., Rochester, N. Y.  
 Lunt-Moss Co., Boston, Mass.  
 McDaniel, C. E., Ottumwa, Ia.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Midwest Engine Co., Indianapolis, Ind.  
 Milwaukee—Milwaukee Air Power Pump Co., Milwaukee, Wis.  
 Myers—F. E. Myers & Bro., Ashland, O.  
 National—National Utilities Corp., Milwaukee, Wis.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Neverquit—Pittsburgh Pump & Supply Co., Pittsburgh, Pa.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Nocost—Illinois Pump & Brass Co., Peoria, Ill.  
 Paul—Ft. Wayne Engineering & Mfg. Co., Ft. Wayne, Ind.  
 Red Jacket Mfg. Co., Davenport, Ia.  
 Roberts—Geo. J. Roberts Co., Dayton, O.  
 Rohaco—Roberts-Hamilton Co., Minneapolis, Minn.  
 Sanitary—The Sanitary Pump Co., Dayton, O.  
 Simplex—Baltimore Cooperage Co., Baltimore, Md.  
 Standard—Standard Pump & Engine Co., Akron, O.  
 Steel Tank and Products Corporation of Aurora, Chicago, Ill.  
 Universal—Latta-Martin Pump Co., Hickory, N. C.  
 V. & K.—The Valle & Kimes Co., Dayton, Ohio.  
 Weber Subterranean—Weber Subterranean Pump Co., New York, N. Y.  
 Westco Tankless—Western Pump Co., Davenport, Ia.  
 Westco—Plant Engineering & Equipment Co., New York, N. Y.

#### TABLES, ASSEMBLING, WELDING, ETC.

Continental Auto Parts Co., Columbus, Ind.

#### TABLES, BRAZING.

Bellevue—Bellevue Furnace Co., Detroit, Mich.  
 ♦ Chicago Flexible Shaft Co., Chicago, Ill.  
 Improved Appliance Co., Brooklyn, N. Y.  
 Johnson—Johnson Gas Appliance Co., Cedar Rapids, Ia.  
 Simplex—Simplex Tool & Supply Co., Boston, Mass.

#### TABLES, CONCENTRATING.

Wildfey—Mine & Smelter Sup. Co., Salt Lake City, Utah.

#### TABLES, DRESSING.

Federal-Huber Co., Chicago, Ill.  
 Madelia—Thos. Maddock's Sons Co., Trenton, N. J. (vitreous china).  
 Mott Iron Works, The, J. L., Trenton, N. J.

#### TABLES, LABORATORY.

Alberene—Alberene Stone Co., Chicago and New York.  
 Phoenix Soapstone Co., New York, N. Y. (soapstone).  
 Victoria—J. L. Mott Iron Works, Trenton, N. J.

#### TABLES, MANICURE.

Maddington—Thomas Maddock's Sons Co., Trenton, N. J.  
 Monument Pottery Co., Trenton, N. J.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### TABLES, MASSAGE, PORCELAIN.

Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

#### TABLES, PLANE.

Gurley—W. & L. E. Gurley, Troy, N. Y.

#### TABLES, SAND BLAST.

Hoewel—Hoewel Mfg. Corp., Jersey City, N. J.  
 McLeod Co., Cincinnati, O.  
 Pangborn Co., Hagerstown, Md.  
 Sly, W. W., Mfg. Co., Cleveland, O.  
 Three-in-One—W. F. Stodder, Syracuse, N. Y.

#### TABLES, SAW.

(See also "Woodworkers, Variety.")  
 American Saw Mill Machinery Co., Hackettstown, N. J.  
 Armstrong Mfg. Co., Portland, Ore.  
 Badger State—Badger State Machine Works, Beloit, Wis.

Beach—Beach Mfg. Co., Montrose, Pa.  
 Beloit—Hendley & Whittemore Co., Beloit, Wis.  
 ♦ Crescent—Crescent Machine Co., Leetonia, O.  
 Dodd—Dadds, Alexander, Grand Rapids, Mich.  
 Grabo, E. O., New York, N. Y.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Grimm Mfg. Co., Buffalo, N. Y.  
 Hick—The Woods Engineering Co., Alliance, C.  
 Hildreth Bros.—Lewis R. Ripley, Harvard, Mass.  
 ♦ Hoosier—Sinker-Davis Co., Indianapolis, Ind.  
 Hub Machine Welding & Contracting Co., Philadelphia.  
 Kidder, R. E., Worcester, Mass.  
 King Bros. Machine Works, Spring City, Tenn.  
 Lindahl, Henry, Machine Co., Chicago, Ill.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Root Co., B. M., York, Pa. (portable).  
 Samco—San Antonio Machine & Supply Co., San Antonio, Tex.  
 Seneca Falls Mfg. Co., Seneca Falls, N. Y.  
 Sidney Tool Co., The, Sidney, O.  
 Silver—Silver Mfg. Co., Salem, O.  
 Specialty Mfg. Co., South Norwalk, Conn.  
 Sultan-Whitman Agricultural Co., St. Louis, Mo.  
 Stewart—S. A. Stewart & Co., Waltham, Mass.  
 United States Machine Co., Williamsport, Pa.  
 Wallace—J. D. Wallace & Co., Chicago, Ill.  
 Woods Engineering Co., The, Alliance, O.  
 Wood-Workers' Tool Works, Chicago, Ill.  
 Yates, P. B., Machine Co., Beloit, Wis.

#### TABLES, SCRAPING.

New Britain Machine Co., The, New Britain, Conn.

#### TABLES, SPACING, FOR PUNCHES AND SHEARS.

Hilles & Jones Co., Wilmington, Del.  
 Thomas Spacing Machine Co., Pittsburgh, Pa.

#### TABLES, STEAM.

Aldrich Mfg. Co., Buffalo, N. Y.

#### TABLES, STEEL.

Angle Steel Stool Co., Ctsego, Mich.  
 Bernstein Mfg. Co., Philadelphia, Pa.  
 Durand Steel Locker Co., Chicago, Ill.  
 Kidde & Co., New York, N. Y.

#### TABLES, WORK, FACTORY.

New Britain Machine Co., New Britain, Conn.

#### TACHODOMETERS.

Veeder—Veeder Mfg. Co., Hartford, Conn.

#### TACHOMETERS.

American Ever Ready Co., New York.  
 Bristol's—The Bristol Co., Waterbury, Conn. (recording).  
 Brown—Brown Instrument Co., Philadelphia, Pa.  
 O-Z—O. Zernickow, New York, N. Y.  
 Queen-Gray Co., Philadelphia, Pa.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Veeder Mfg. Co., Hartford, Conn.

#### TACHOSCOPES.

O. Z.—O. Zernickow, New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y. (speed indicator and watch combined).

#### TACKS, BRASS, COPPER AND STEEL.

♦ American Steel & Wire Co., Chicago, Ill.  
 Atlas Tack Corp., Fairhaven, Mass. (wire and cut, all metal).  
 Bernz, Otto, Newark, N. J.  
 Cobb & Drew, Inc., Plymouth, Mass.  
 Eagle Brand—Taunton-New Bedford Copper Co., Taunton, Mass.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Miller's, H. J., Sons, Bridgewater, Mass.  
 Milwaukee Tack Co., Milwaukee, Wis.  
 Rome Brass & Copper Co., Rome, N. Y.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Tower Mfg. Co., Madison, Ind.  
 York Tack & Nail Works, York, Pa.

#### TACKS, BIN, FOR MILL SUPPLY HOUSES.

Haddon Specialty Co., Haddon Heights, N. J.

#### TALC, FOR ALL PURPOSES.

Georgia Talc Co., Asheville, N. C.  
 Hill & Griffith Co., Cincinnati, Ohio.  
 Obermayer, S. Co., The, Cincinnati, Ohio.  
 Talc Products Co., New York, N. Y.

#### TALC AND MICA, AUTO, TIRE.

Northwestern Chemical Co., The, Marietta, O.  
 U. S. Original—U. S. Mica Mfg. Co., Chicago, Ill.

**TAMPER, TIE.**

Kalamazoo Railway Supply Co., Kalamazoo, Mich.

**TAMPERS, ASPHALT, BASTE, ETC.**

American Scale Co., Kansas City, Mo.  
 Diemer, Geo. W., Mfg. Co., Chicago, Ill.  
 ♦ Dunn—Duff Mfg. Co., Pittsburgh, Pa.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Hubbard & Co., Pittsburgh, Pa.  
 Indiana Foundry Co., Indiana, Pa.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Modern Iron Works, Quincy, Ill.  
 South Bend Foundry Co., South Bend, Ind.  
 Stearns, E. C., & Co., Syracuse, N. Y.  
 Swett, A. L., Iron Works, Medina, N. Y.  
 Tampers, Power, Traction, P. & H.—Fawling & Harnischfeger Co., Milwaukee, Wis.  
 The Dick Tool Co., Downers Grove, Ill.

**TAMPERS, MINERS.**

Salem Tool Co., Salem, O.

**TAMPERS, POWER.**

Hobbs—Hobbs Concrete Machinery Co., Columbus, Ohio.

**TAMPERS, TIE AND RAIL BONDING OUTFITS.**

Imperial—Ingersoll-Rand Co., New York.

**TANKS AND VATS, ACID AND CHEMICAL.**

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 Alberne—Alberne Stone Co., Chicago and New York.  
 American Hard Rubber Co., New York.  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Caldwell Co., W. E., Louisville, Ky.  
 Columbiana Boiler Co., Columbiana, O.  
 Connolly Supply Co., Brooklyn, N. Y.  
 Dillon Steam Boiler Works, D. M., Fitchburg, Mass.  
 Graver Tank Works, Wm., East Chicago, Ind.  
 Hamburg Boiler Works, Hamburg, Pa.  
 Hamler Boiler & Tank Co., Chicago, Ill.  
 Hammond Iron Works, Warren, Pa.  
 International Boiler Works Co., East Stroudsburg, Pa.  
 Koven & Bro., L. O., Jersey City, N. J.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Munroe, R., & Sons Mfg. Corp., Pittsburgh, Pa.  
 National & Shelby—National Tube Co., Pittsburgh, Pa.  
 N. O. Nelson Marble Co., Edwardsville, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 New York Slate Works, New York, N. Y.  
 Oswego Boiler & Engine Co., Oswego, N. Y.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Riter-Conley Co., Pittsburgh, Pa.  
 Riverside—Riverside Boiler Works, Inc., Cambridge, Mass.  
 Pfauiler Co., The, Rochester, N. Y.  
 Ruemmelli-Dawley Mfg. Co., The, St. Louis, Mo.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Sharon Boiler Works, Wheatland Road, Sharon, Pa.  
 Struthers-Wells Co., Warren, Pa.  
 Valley Iron Works Co., Appleton, Wis.  
 Woodley—Woodley Slate Co., Bangor, Pa.

**TANKS, AIR BRAKE, COMPRESSOR, GARAGE WHISTLE, REEF PUMP, ENGINE STARTER, FIRE EXTINGUISHER, MOTOR BOAT, RECTANGULAR, BRASED HIGH PRESSURE, ETC.**

Biggs Boiler Works Co., The, East Akron, O.  
 Electric Weld—Wood, John, Mfg. Co., Conshohocken, Pa.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Wm. B. Scaife & Sons Co., Pittsburgh.

**TANKS, AIR OR GAS.**

(See also "Tanks, Steel.")

Atsco—Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 Aurora Steel Tank Co., Chicago, Ill.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Brunner—Brunner Mfg. Co., Utica, N. Y.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Faultless—American Scale Co., Kansas City, Mo.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 Hamburg Boiler Works, Hamburg, Pa.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Leader Iron Works, Decatur, Ill.  
 Murphy & Walsh, Pekin, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Petty & Co., Inc., J. K., Philadelphia, Pa.  
 Phoenix Iron Works, Meadville, Pa.  
 Riverside Boiler Works, Inc., Cambridge, Mass.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Steel Tank & Products Corp., Chicago, Ill.

Struthers-Wells Co., Warren, Pa.  
 United States Air Compressor Co., Cleveland, O.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.

**TANKS, BLOW-OFF.**

(See "Tanks, Steel.")

Aurora Steel Tank Co., Chicago, Ill.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Frost Mfg. Co., The, Galesburg, Ill.  
 Koven, L. O., & Bro., Jersey City, N. J.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Pacific—General Boilers Co., Waukegan, Ill.  
 Phoenix Iron Works, Meadville, Pa.  
 Steel Tank & Products Corp., Chicago, Ill.  
 Struthers-Wells Co., Warren, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TANKS, BRACING.**

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 American Steel Barrel Co., Brooklyn, N. Y.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
 United Pump & Power Co., Milwaukee, Wis.

**TANKS, CAST IRON.**

Clow, James B., & Sons, Chicago, Ill.  
 Weld, Geo. A., & Co., Boston, Mass.

**TANKS, CHEMICAL ENGINE.**

(See Engines, Fire Chemical.)

Pirsch, Peter & Sons Co., Kenosha, Wis.  
 Riverside Boiler Works, Inc., Cambridge, Mass.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.

**TANKS, CONCRETE.**

Acme Granolithic Co., Boston, Mass.  
 Columbiana Boiler Co., The, Columbiana, Ohio.  
 Furlong, Thos. N., San Francisco, Cal.  
 Scaife, Wm. B., & Sons Co., Pittsburgh.

**TANKS, CONDENSER.**

(See "Tanks, Steel.")

Biggs Boiler Works Co., East Akron, O.  
 Columbiana Boiler Co., The, Columbiana, Ohio.  
 Phoenix Iron Works, Meadville, Pa.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Struthers-Wells Co., Warren, Pa.

**TANKS, COPPER BRAZED.**

Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.

**TANKS, COPPER & BRASS.**

Acme Ventilator Corp., Boston, Mass.  
 Camden Copper Wks., Inc., Camden, N. J.  
 Weld, Geo. A., & Co., Boston, Mass.

**TANKS, EXPANSION.**

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Bazley Iron Works, The, John, Philadelphia, Pa.  
 Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 Biggs Boiler Works Co., East Akron, O.  
 Buffalo—Buffalo Pdy. & Machine Co., Buffalo, N. Y.  
 Capitol Triton—U. S. Radiator Corp., Detroit, Mich.  
 Carroll—P. Carroll & Son, Philadelphia, Pa.  
 Champion—Samuel Sloan & Co., Rochester, N. Y.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Eastern—W. A. Case & Sons Mfg. Co., Buffalo, N. Y.  
 Hackney—Pressed Steel Tank Co., Milwaukee, Wis.  
 Horgan Aqua—Missouri Water & Steam Supply Co., St. Joseph, Mo.  
 Ideal—American Radiator Co., Chicago, Ill.  
 International Boiler Works Co., East Stroudsburg, Pa.  
 Koven & Bro., L. O., Jersey City, N. J.  
 Lawler's Automatic—Lawler Regulator Co., New York, N. Y.  
 Morrison Bros., Dubuque, Ia.  
 Mueller Furnace Co., L. J., Milwaukee, Wis.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Oil City Boiler Works, Oil City, Pa.  
 Penn—The Penn Engineering Co., Philadelphia, Pa.  
 Pennsylvania Range Boiler Co., Philadelphia, Pa.  
 Petty, J. K., & Co., Inc., Philadelphia, Pa.  
 Riverside—Riverside Boiler Works, Inc., Cambridge, Mass.  
 Scaife, Wm. B., & Sons Co., Pittsburgh, Pa.  
 Sheet Metal Products Co., Duluth, Minn.  
 Sistersville Boiler Works, Sistersville, W. Va.  
 Sodeman Heat & Power Co., St. Louis, Mo.  
 Star—Detroit Range Boiler Co., Detroit, Mich.  
 Stover—Stover Steel Tank Co., Freeport, Ill.  
 Struthers-Wells Co., Warren, Ohio.  
 Thompson Iron Works, The, Philadelphia, Pa.  
 Traverser Steam Copper Works, John, New York.  
 Union Metal Works, Chelsea, Mass.  
 Union Radiator Co., Johnstown, Pa.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.



- ♦ **Walworth Mfg. Co.**, Boston, Mass.  
**Whitaker-Glessner Co.**, Portsmouth, Ohio.  
**Wolff Mfg. Co.**, Chicago, Ill.

#### TANKS, FILTER.

(See "Tanks, Steel.")

Aurora Steel Tank Co., Chicago, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Sealife, Wm. B., & Sons Co., Pittsburg, Pa.  
 Steel Tank & Products Corp., Chicago, Ill.  
 Struthers-Wells Co., Warren, Ohio.

#### TANKS, FIRE BUCKET.

Iron Horse—Rochester Can Co., Rochester, N. Y.  
 Jiffy—Jiffy Fire Hose Rack Co., New York, N. Y.  
 Ono Frezo Fire Extinguisher Mfg. Co., St. Louis, Mo.  
 Peerless—Peerless Safety Can & Device Mfg. Co., Chicago, Ill.  
 Safety—Safety Fire Extinguisher Co., New York, N. Y.  
 Simmons, John, Co., New York, N. Y.

#### TANKS, GALVANIZING.

Biggs Boiler Works Co., East Akron, O.  
 Hamburg—Hamburg Boiler Works, Hamburg, Pa.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Meeker Galvanizing Barrel—The Meeker Co., Chicago, Ill.  
 Ruemmelli-Dawley Mfg. Co., The, St. Louis, Mo.  
 Sealife, Wm. B., & Sons Co., Pittsburg, Pa.  
 Sheet Metal Products Co., Duluth, Minn.

#### TANKS, GASOLINE.

(See, also, "Systems, Gasoline Storage.")

American Oil Pump & Tank Co., Cincinnati, Ohio.  
 Atsco—Air-Tight Steel Tank Co., Pittsburg, Pa.  
 Aurora—Steel Tank & Products Corp., Chicago, Ill.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Blanke Can & Mfg. Co., W. F., St. Louis, Mo.  
 Bliss, E. W., Co., Brooklyn, N. Y.  
 Bowser Co., S. F., Fort Wayne, Ind.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Columbian Steel Tank Co., Kansas City, Mo.  
 Davis & Farnum Mfg. Co., Waltham, Mass.  
 Eastern—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
 Economy—Economy Gas Machine Co., Rochester, N. Y.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.

♦ **Fairbanks, Morse & Co.**, Chicago, Ill.  
 "G. P. F."—Geuder, Paeschke & Frey Co., Milwaukee, Wis.  
 Gilbert & Barker—Gilbert & Barker Mfg. Co., New York, N. Y.  
 Hammond Iron Works, Warren, Pa.  
 Hamburg Boiler Wks., Hamburg, Pa.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Imperial—Climax Mach. & Burner Co., Newark, N. J.  
 Improved Appliance Co., Brooklyn, N. Y.  
 International Boiler Works Co., East Stroudsburg, Pa.  
 Joliet—Amco Sales Corp., Chicago, Ill.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Koven & Bros., L. O., Jersey City, N. J.  
 Littleford Bros., Cincinnati, O.  
 Metals Production Equipment Co., New York, N. Y.  
 Milwaukee Tank Works, Inc., Milwaukee, Wis.  
 Munroe, R., & Sons Mfg. Corp., Pittsburg, Pa.  
 Murphy & Walsh, Pekin, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Petty, J. K., & Co., Inc., Philadelphia, Pa.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Protection—Geo. W. Diener Mfg. Co., Chicago, Ill.  
 Riverside Boiler Works, Cambridge, Mass.  
 Sealife & Sons Co., Wm. B., Pittsburg, Pa.  
 Sistersville Boiler Works, Sistersville, W. Va.  
 Stover Steel Tank Co., Freeport, Ill.  
 Struthers-Wells Co., Warren, Ohio.  
 Tokheim Oil Tank & Pump Co., Fort Wayne, Ind.  
 Trageser, John, Steam Copper Works, New York, N. Y.  
 Victor Pump Co., Grand Rapids, Mich.  
 Wayne—Wayne Oil Tank & Pump Co., Fort Wayne, Ind.  
 Weldex Mfg. Co., Richmond, Ind.  
 Welded Steel Barrel Corp., Detroit, Mich.  
 Western Oil Pump & Tank Co., St. Louis, Mo.  
 Wilson & Bennett Mfg. Co., Chicago, Ill.  
 Wilson, F. Cortez, Co., Chicago, Ill.

#### TANKS, GRAIN STORAGE.

Biggs Boiler Works Co., The, East Akron, O.  
 Columbiana Boiler Co., Columbiana, O.  
 Freeman & Sons Mfg. Co., Racine, Wis.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Polk System—Polk-Genung-Polk Co., Fort Branch, Ind.  
 Ritter-Conley Co., Pittsburg, Pa.  
 Sealife, Wm. B., & Sons Co., Pittsburg, Pa.  
 Sheet Metal Products Co., Duluth, Minn.  
 Wilson Steam Boiler Co., Omaha, Neb.

#### TANKS, HOT WATER STORAGE.

Air-Tight Steel Tank Co., Pittsburg, Pa.  
 American Radiator Co., Chicago, Ill.

Aurora—Steel Tank & Products Corp., Chicago, Ill.  
 Badger & Sons Co., E. B., Boston, Mass. (copper).  
 Balseley Iron Works, The John, Philadelphia, Pa.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Bros—Wm. Bros. Boiler & Mfg. Co., Minneapolis, Minn.

Caldwell Co., W. E., Louisville, Ky.  
 Case, W. A., & Son Mfg. Co., Buffalo, N. Y.  
 Collins Iron Works, Phelps, N. Y.  
 Columbiana Boiler Co., The, Columbiana, Ohio.  
 Dahlquist Mfg. Co., South Boston, Mass. (copper).  
 ♦ **Dodge Sales & Engineering Co.**, Mishawaka, Ind.  
 Drake-Williams-Mount Co., Omaha, Neb.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Felber Engineering Works, New York, N. Y.  
 Gerstein Bros. & Cooper, So. Boston, Mass. (copper).  
 Hamburg Boiler Works, Hamburg, Pa.  
 ♦ **Hoseler—The Sinker-Davis Co.**, Indianapolis, Ind.  
 International Boiler Works Co., East Stroudsburg, Pa.  
 Jarvis Engine & Machine Works, Lansing, Mich.  
 Johnson, Konalds, Rex, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Joliet—Amco Sales Corp., Chicago, Ill.  
 Koven & Bros., L. O., Jersey City, N. J.  
 Leader—Leader Iron Works, Decatur, Ill.  
 McDonnell Boiler & Iron Works, Des Moines, Ia.  
 Morrison Bros., Dubuque, Iowa.  
 Munroe, R., & Sons Mfg. Corp., Pittsburg, Pa.  
 Murphy & Walsh, Pekin, Ill.  
 National Supply Co., Chicago, Ill.  
 National—National Steel Tank & Mfg. Co., Bradford, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Oil City Boiler Works, Oil City, Pa.  
 Pacific—General Boilers Co., Waukegan, Ill.  
 Pennsylvania Range Boiler Co., Philadelphia, Pa.  
 Petty, J. K., & Co., Inc., Philadelphia, Pa.  
 Rex—Ross Supply Co., The, Greenville, O.  
 Rumely—Advance-Rumely Co., Inc., La Porte, Ind.  
 Ruemmelli-Dawley Mfg. Co., St. Louis, Mo.  
 Sealife, Wm. B., & Sons Co., Pittsburg, Pa.  
 Sims—The Sims Co., Erie, Pa.  
 Standard Steel Tank & Mfg. Co., Pittsburg, Pa.  
 Stover Steel Tank Co., Freeport, Ill.  
 Struthers-Wells Co., Warren, Pa.  
 Thompson Iron Works, Philadelphia, Pa.  
 Trageser, John, Steam Copper Works, New York, N. Y.  
 Vance—Vance Boiler Works, Geneva, N. Y.  
 Weld, Geo. A., Co., Boston, Mass. (enameled).  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.

#### TANKS, HYDRO-PNEUMATIC.

(See, also, "Systems, Water Supply and Tanks, Steel.")

Aurora—Steel Tank & Products Corp., Chicago, Ill.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Bros—Wm. Bros. Boiler & Mfg. Co., Minneapolis, Minn.  
 Davis Farnum Mfg. Co., Waltham, Mass.  
 ♦ **Deming Co.**, The, Salem, O.  
 Eastern—W. A. Case & Son, Mfg. Co., Buffalo, N. Y.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Joliet—Amco Sales Corp., Chicago, Ill.  
 Milwaukee Reliance Boiler Works, Milwaukee, Wis.  
 National Steel Tank & Mfg. Co., Bradford, Ill.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Pacific—General Boilers Co., Waukegan, Ill.  
 Quality—The Hell Co., Milwaukee, Wis.  
 Riverside Boiler Works, Inc., Cambridge, Mass.  
 Sealife, W. B., & Sons Co., Pittsburg, Pa.  
 Star—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Struthers-Wells Co., Warren, Pa.  
 Toledo Metal Mfg. Co., The, Toledo, O.  
 Trageser, John, Steam Copper Works, New York, N. Y.  
 Wilkes, S. Mfg. Co., Chicago, Ill.  
 Wood Mfg. Co., John, Conshohocken, Pa.

#### TANKS, JACKETED.

Biggs Boiler Works Co., The, East Akron, O.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 New York Central Iron Works Co., Hagerstown, Md.

#### TANKS, LEAD, TIN OR COPPER LINED.

Codd, E. J., Co., Baltimore, Md.  
 Hogan—Hogan Mfg. Co., Hartford, Conn.  
 Koven, L. O., & Bros., Jersey City, N. J.  
 Tripure—Standard Water Systems Co., Hampton, N. J.  
 United Lead Co., New York, N. Y.

#### TANKS, OIL STORAGE, CRUDE.

Mobile Steel Co., Mobile, Ala.

#### TANKS AND CABINETS, OIL STORAGE AND FILLING STATIONS.

(See, also, "Cans, Oil.")

Atsco—Air-Tight Steel Tank Co., Pittsburg, Pa.  
 American—The American Oil Pump & Tank Co., Dayton, O.  
 American—American Pump & Tank Co., New York.  
 Atsco—Air Tight Steel Tank Co., Pittsburg, Pa.





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Columbian Steel Tank Co., Kansas City, Mo.  
Columbiana Boiler Co., Columbiana, Ohio.  
Davis & Farnum Mfg. Co., Waltham, Mass.  
Diener Geo. W., Mfg. Co., The, Chicago, Ill.  
Drake-Williams-Mount Co., Omaha, Neb.  
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Gilbert & Barker—Gilbert & Barker Mfg. Co., New York, N. Y.

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Hamburg Boiler Works, Hamburg, Pa.  
Hamler Boiler & Tank Co., Chicago, Ill.  
Hydraulic Oil Storage Co., New York.  
Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
Kessler Safety Device Co., Chicago, Ill.  
Koven & Bro., L. O., Jersey City, N. J.  
Lancaster Iron Works, Inc., Lancaster, Pa.  
Leader Iron Works, Decatur, Ill.  
Milwaukee Tank Works, Inc., Milwaukee, Wis.  
Morrison Bros., Dubuque, Ia.  
New York Central Iron Works Co., Inc., Hagerstown, Md.

New York Oil Cabinet Co., New York, N. Y.  
Nugent, Wm., & Co., Chicago, Ill.  
Pennsylvania Furnace & Stove Co., Warren, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Rapidayton—Dayton Pump & Mfg. Co., Dayton, O.  
Redwood Manufacturers Co., San Francisco, Calif.  
Remco—Redwood Manufacturers Co., San Francisco, Cal.

Richardson-Phenix Co., Milwaukee, Wis.  
Ritter-Conley Co., Pittsburgh, Pa.  
Ruemmelli-Dawley Mfg. Co., St. Louis, Mo.  
Rumely—Advance-Rumely Co., Inc., La Porte, Ind.  
Scalfe, Wm. B., & Sons Co., Pittsburgh, Pa.  
Schofield, J. S., & Sons, Co., Macon, Ga.  
Sexton Can Co., Boston, Mass.  
Sheet Metal Products Co., Duluth, Minn.  
Struthers-Wells Co., Warren, Pa.  
Tokheim—The Tokheim Mfg. Co., Inc., Cedar Rapids, Ia.

Turner Oil Filter Co., Niles, Mich.  
Victor Pump Co., The, Grand Rapids, Mich.  
Wall Mfg. & Supply Co., The P., Pittsburgh, Pa.  
Wayne Oil Tank & Pump Co., Fort Wayne, Ind.  
Western Oil Pump & Tank Co., St. Louis, Mo.  
White Star—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

Wiley—The New York Oil Cabinet Co., New York.  
Wilson & Bennett Mfg. Co., Chicago, Ill.  
Wilson & Co., F. Cortez, Chicago, Ill.

#### TANKS, KETTLES, STILLs AND EVAPORATING DISHES, GLASS, PORCELAIN ENAMELED.

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Lancaster Iron Works, Inc., Lancaster, Pa.

#### TANKS, OIL AND WATER SEPARATING.

Biggs—Biggs Boiler Works, The, East Akron, O.  
Columbiana Boiler Co., The, Columbiana, O.  
Morrison Bros., Dubuque, Iowa.  
White Star—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

#### TANKS, PAINT STORAGE, WITH PUMPS.

New York Central Iron Works Co., Hagerstown, Md.  
Struthers-Wells Co., Warren, Pa.  
Western Oil Pump & Tank Co., St. Louis, Mo.

#### TANKS, PORCELAIN LINED.

Chattanooga Stamping & Enameling Co., Chattanooga, Tenn.

#### TANKS, PRESSURE.

Aurora—Steel Tank and Products Corporation, Chicago, Ill.  
Beckley Perforating Co., Garwood, N. J.  
Columbiana Boiler Co., Columbiana, Ohio.  
Doud Lighting Co., Chicago, Ill. (to 13 gal.)  
Graver, Wm., Tank Works, East Chicago, Ind.  
Littleford Bros., Cincinnati, Ohio.  
New York Central Iron Works Co., Hagerstown, Md.  
Petty, J. K., & Co., Inc., Philadelphia, Pa.  
Phoenix Iron Works Co., Meadville, Pa.  
Scalfe, Wm. B., & Sons Co., Pittsburgh, Pa.  
Struthers-Wells Co., Warren, Pa.

#### TANKS, QUENCHING, AUTOMATIC.

American Gas Furnace Co., Elizabeth, N. J.

#### TANKS, RECEIVER.

Air-Tight Steel Tank Co., Pittsburgh, Pa.  
Aurora—Steel Tank & Products Corp., Chicago, Ill.  
Biggs Boiler Works Co., The, East Akron, O.

Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
Murphy & Walsh, Pekin, Ill.  
Scalfe & Sons Co., Wm. B., Pittsburgh, Pa.  
Sims—The Sims Co., Erie, Pa.  
Struthers-Wells Co., Warren, Pa.  
Van Auker—Thermograde Valve Co., Boston, Mass.

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Hoevel Mfg. Corp., Jersey City, N. J.  
Scalfe, Wm. B., & Sons Co., Pittsburgh, Pa.

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Anchor Stone Co., Minneapolis, Minn.  
Andrews—Andrews Heating Co., Minneapolis, Minn.  
Ashley—Ashley Sewage Disposal Co., Morgan Park, Ill.

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Cement Products Co., Wilmington, N. C.  
Collins Iron Works, Phelps, N. Y.  
International Boiler Works Co., East Stroudsburg, Pa.  
Kaustine Co., Inc., Buffalo, N. Y.  
Koven & Bro., L. O., Jersey City, N. J.  
Macomb Sewer Pipe Works, Macomb, Ill.  
Marion—American Sanitary Sewage Co., Memphis, Tenn.

Merritt—Merritt-Hydraulic Co., Philadelphia.  
Miller & Adams Patents—Pacific Flush Tank Co., Chicago, Ill.  
Morrison Bros., Dubuque, Iowa.

Perfection—United Cement Products Co., Indianapolis, Ind.

Rohaco—Roberts-Hamilton Co., Minneapolis, Minn.  
Vance Boiler Works, Geneva, N. Y.  
Wakeman—D. G. Wakeman, Portland, Ind.  
Waterman-Waterbury Co., The, Minneapolis, Minn. (indoor and underground).  
Wolverine—Dall Steel Products Co., Lansing, Mich.

#### TANKS, SODA DIPPING.

Koven, L. O., & Bro., Jersey City, N. J.  
Trout's—Lufkin Foundry & Machine Co., Lufkin, Tex.

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Abendroth, G. Irving, Co., Inc., New York, N. Y.  
Acme Ventilator Corp., Boston, Mass.  
Akerlund & Semmes, Inc., New York, N. Y.  
Allen Sons Co., Wm., Worcester, Mass.  
Andrews—Andrews Heating Co., Minneapolis, Minn.  
Appleton Mfg. Co., Batavia, Ill.  
Atsco—Air Tight Steel Tank Co., Pittsburgh, Pa.  
Aurora—Steel Tank & Products Corp., Chicago, Ill.  
Avery Stamping Co., Cleveland, O.  
Bailley Iron Works, The John, Philadelphia, Pa.  
Baltimore Cooperage Co., Baltimore, Md.  
Barnes Mfg. Co., The, Mansfield, O.  
Bartlett-Hayward Co., Baltimore, Md.  
Bass Foundry & Machine Co., The, Fort Wayne, Ind.  
Bay City Iron Co., Bay City, Mich.  
Best—Johnston Mfg. Co., Kansas City, Mo.  
Bigelow Co., The, New Haven, Conn.  
Biggs Boiler Works Co., The, East Akron, O.  
Billow—National Supply Co., Chicago (pneumatic).  
Blue Ball Machine Works, Blue Ball, Pa.  
Bovard & Seyfang Mfg. Co., Bradford, Pa.  
Brennan & Co., Inc., John, Detroit, Mich.  
Bretting, C. G., Mfg. Co., Ashland, Wis.  
Buckeye—Mast, Foss & Co., Springfield, O. (blow-off).  
Bushnell Pump Co., Bushnell, Ill.  
Butler—Butler Co., The, Butler, Ind.  
Caldwell Co., W. E., Louisville, Ky.  
Cambridge Iron Works, Cambridge, Mass.  
Carbondale Machine Co., The, Carbondale, Pa.  
Carruthers-Fithian Clutch Co., The, Grove City, Pa.  
Case, W. A., & Son Mfg. Co., Buffalo, N. Y.  
Central Boiler & Supply Co., Grand Rapids, Mich.  
Challenge Co., Batavia, Ill.  
Cochrane—Harrison Safety Steam Boiler Co., Philadelphia.

Codd Co., E. J., Baltimore, Md.  
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Columbiana Boiler Co., Columbiana, O.  
Columbus Steam Boiler & Heater Co., Columbus, O.  
Connery & Co., Philadelphia, Pa.  
Connelly, D., Boiler Co., The, Cleveland, O.  
Cook, Kneeland & Co., Albion, Mich.  
Crook, H. E., Co., Inc., Baltimore, Md.  
Curtis & Co. Mfg. Co., St. Louis, Mo.  
Davis & Farnum Mfg. Co., Waltham, Mass.  
Dayton Steam Boiler Works, Dayton, O.  
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Delaware Steel Co., New York.  
De Luxe—United Conveyor Corporation, Chicago, Ill.  
Dempster Mfg. Co., Des Moines, Ia.  
♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
Eagle Tank Co., Chicago, Ill.  
Eclipse—Fairbanks, Morse & Co., Chicago, Ill.  
Empire Metal Tank Wks., East Rochester, N. Y. (auto-mobile, truck, fuel storage water cooling).  
♦ Fairbanks, Morse & Co., Chicago, Ill.  
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Godfrey-Keeler Co., New York, N. Y.  
Graver Tank Works, Wm., East Chicago, Ind.  
Griscom-Russell Co., New York, N. Y.  
Gueder, Paeschke & Frey Co., Milwaukee, Wis.  
Hackney—Pressed Steel Tank Co., Milwaukee, Wis.  
Hamburg—Hamburg Boiler Works, Hamburg, Pa.  
Hamler Boiler & Tank Co., Chicago, Ill.  
H.-A. Co.—The Heller-Aller Co., Napoleon, O.  
Hammond Iron Works, Warren, Pa.  
Harry—O. K. Harry Steel Co., St. Louis, Mo.  
Hartley Boiler Works, Montgomery, Ala.  
Heine Boiler Co., St. Louis, Mo.  
Hepe & Sons Mfg. Co., Theo., St. Louis, Mo.  
Hibben & Co., Chicago, Ill.  
Holmes Iron Co., Rutland, Vt.  
Hindley & Pendleton Co., The, Brooklyn, N. Y.  
Hoosier—Flint & Walling Mfg. Co., Kendallville, Ind.  
International Boiler Works Co., East Stroudsburg, Pa.  
Iowa Mfg. Co., Oskaloosa, Ia.  
Janney, Steinmetz & Co., Philadelphia, Pa.  
Jarvis Engine & Machine Works, Lansing, Mich.  
Jasco—Jamestown Boiler Works, Jamestown, N. Y.  
Keeler Co., R., Williamsport, Pa.  
Kelly Foundry & Machine Co., Goshen, Ind. (Stock  
watering and water storage and thresher wagons.)  
Kelly System—Kelly Mfg. Co., The, Bucyrus, O.  
Kerrihard Co., The, Red Oak, Iowa.  
Kewanee Boiler Co., Kewanee, Ill.  
Kewanee-Pneumatic—Kewanee Private Utilities Co.,  
Kewanee, Ill.  
Kirk & Blum Mfg. Co., Cincinnati, Ohio.  
Knox—Blaw-Knox Co., Pittsburgh, Pa.  
Koven, L. O., & Bro., Jersey City, N. J.  
Lancaster Iron Works, Inc., Lancaster, Pa.  
Lappan Mfg. Co., The, James, Pittsburgh, Pa.  
Leader Iron Works, Decatur, Ill.  
Link Belt Supply Co., Minneapolis, Minn.  
Littleford Bros., Cincinnati, O.  
Lo-Hi—Loane Engineering Co., Baltimore, Md.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
Lufkin Foundry & Machine Co., Lufkin, Tex.  
McDaniel, C. E., Ottumwa, Ia.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
McDonnell Boiler & Iron Works, Des Moines, Ia.  
McNeil & Bro. Co., James, Pittsburgh, Pa.  
McNaull Boiler Mfg. Co., The, Toledo, O.  
Marshall, Wm., Steam Boiler Works, Dubuque, Iowa.  
Mecklenburg Iron Works, Charlotte, N. C.  
Meyers, Geo. J., Mfg. Co., Milwaukee, Wis.  
Michelmann Steel Construction Co., Quincy, Ill.  
Milwaukee Boiler Mfg. Co., The, Milwaukee, Wis.  
Milwaukee Reliance Boiler Works, Milwaukee, Wis.  
Mobile Steel Co., Mobile, Ala.  
Mohr, John, & Sons, Chicago, Ill.  
Morrison Bros., Dubuque, Ia.  
Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
Muskegon Boiler Works, Muskegon, Mich.  
Nagle Engine & Boiler Co., Erie, Pa.  
National—National Products Co., East Liverpool, O.  
National Steel Tank & Mfg. Co., Bradford, Ill.

National & Shelby—National Tube Co., Pittsburgh, Pa.  
New Process Roofing & Supply Co., Dallas, Tex.  
New York Central Iron Works Co., Hagerstown, Md.  
Niles Steel Tank Co., Niles, Mich.  
O'Brien Boiler Works, John, St. Louis, Mo.  
Ohio Machine & Boiler Co., Cleveland, O.  
Oil City Boiler Works, Oil City, Pa.  
Ottumwa, O.-M.—Moline Engine & Pump Co., Ottumwa, Iowa.  
Pacific—General Boilers Co., Waukegan, Ill.  
Paul—Fort Wayne Engineering & Mfg. Co., Fort Wayne, Ind.  
Pennsylvania—Pennsylvania Boiler Works, Erie, Pa.  
Pekin—Murphy & Walsh, Pekin, Ill.  
Perfection—Felker Bros. Mfg. Co., Marshfield, Wis.  
Petty & Co., J. K., Inc., Philadelphia, Pa.  
Pfaudler Co., Rochester, N. Y. (glass lined).  
Phoenix Iron Works Co., Meadville, Pa.  
Pittsburg-Des Moines Steel Co., Des Moines, Iowa.  
Porcupine Company, The, Bridgeport, Conn.  
Prospect Roller Co., The, New Brunswick, N. J.  
Quality—The Hell Co., Milwaukee, Wis.  
Reading Scale & Machine Co., Reading, Pa.  
Red Cross—The Red Cross Mfg. Co., Bluffton, Ind.  
Rex—Rosa Supply Co., The, Greenville, O.  
Ritter-Conley Co., Pittsburgh, Pa.  
Riverside—Riverside Boiler Works, Inc., Cambridge, Mass.  
Ruemmler-Dawley Mfg. Co., St. Louis, Mo.  
Scalfe, Wm. B., & Sons Co., Pittsburgh, Pa.  
Scannell Boiler Works, Lowell, Mass.  
Schofield, J. S., Sons Co., Macon, Ga.  
Sharkey & Peck, Chicago, Ill.  
Sheet Metal Products Co., Duluth, Minn.  
Shelby—National Tube Co., Pittsburgh, Pa.  
Sims—The Sims Co., Erie, Pa.  
Sinker-Davis Co., The, Indianapolis, Ind.  
Sistersville Boiler Works, Sistersville, W. Va.  
Smith Machine Works, R. L., Lincoln, Neb.  
Smith & Son Co., Samuel, Paterson, N. J.  
Squier, Geo. L., Mfg. Co., The, Buffalo, N. Y.  
Stacy—The Stacy Mfg. Co., Cincinnati, O.  
Standard—Standard Water System Co., Hampton, N. J.  
Star—Detroit Range Roller Co., Detroit, Mich.  
Stover—Stover Steel Tank Co., Freeport, Ill.  
Struthers-Wells Co., Warren, Pa.  
Thompson Iron Works, Philadelphia, Pa.  
Tippett & Wood, Philadelphia, Pa.  
Titusville Iron Works Co., The, Titusville, Pa.  
Toepfer, W., & Sons Co., Milwaukee, Wis.  
Trageser, John, Steam Copper Works, New York.  
Treadwell Co., M. H., Inc., New York.  
Tudor Boiler Mfg. Co., The, Cincinnati, O.  
Twin City—Twin City Co., Minneapolis, Minn.  
Union Boiler & Mfg. Co., Lebanon, Pa.  
Union Iron Works, Erie, Pa.  
U. S. Wind Engine & Pump Co., Batavia, Ill.  
United—United Iron Works Co., Kansas City, Mo.  
Vance Boiler Works, Geneva, N. Y.  
Victor Pump Co., The, Grand Rapids, Mich.  
Walsh Boiler & Iron Works, Springfield, Mass.  
Walsh & Weldner Boiler Co., The, Chattanooga, Tenn.  
Walsh, Ed., Superior Boiler Works, Marion, Ind.  
Warren Boiler Wks., Warren, O.  
Wayne Oil Tank & Pump Co., Fort Wayne, Ind.  
Weinman—Weinman Pump Mfg. Co., Columbus, O.  
Weldex Manufacturing Co., Richmond, Ind.

Weld, Geo. A. & Co., Boston, Mass.  
 Western Gas Construction Co., The, Fort Wayne, Ind.  
 (Ammonia, oil and water).  
 Western Pipe & Steel Co., Los Angeles, Cal.  
 Westinghouse Traction Brake Co., Pittsburg, Pa.  
 (air).  
 Welded—Eastern Range Boiler & Welding Co., Conshohocken, Pa.  
 Wholey Boiler Works, Providence, R. I.  
 Wickes Boiler Co., The, Saginaw, Mich.  
 Wildman Boiler Works, Chicago, Ill.  
 Wilfong Iron Works Co., Millard F., Philadelphia, Pa.  
 Wilks—S. Wilks Mfg. Co., Chicago, Ill.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Young Bros. Company, Detroit, Mich.  
 Zenner & Smith, Chicago, Ill.

#### TANKS, STORAGE.

(See "Tanks, Hot Water.")

Atasco—Air-Tight Steel Tank Co., Pittsburgh, Pa.  
 Beckley Perforating Co., Garwood, N. J.  
 Biggs Boiler Works Co., The, East Akron, O.  
 Butler—Butler Mfg. Co., Kansas City, Mo.  
 Codd Co., E. J., Baltimore, Md.  
 Columbiana Boiler Co., The, Columbiana, Ohio.  
 Columbian Steel Tank Co., Kansas City, Mo.  
 Dillon, D. M., Steam Boiler Works, Fitchburg, Mass.  
 Freeman Mfg. Co., Racine, Wis.  
 Garnett Co., The, Allentown, Pa.  
 Gilbert & Barker Mfg. Co., Springfield, Mass.  
 Ideal—Kupferle Bros. Mfg. Co., St. Louis, Mo.  
 Kaustine Co., Inc., Buffalo, N. Y.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Keystone Boiler & Foundry Co., Landisville, Pa.  
 Koven, L. O. & Bro., Jersey City, N. J.  
 Miller Machine Works, Springs, Pa.  
 Milwaukee Reliance Boiler Works, Milwaukee, Wis.  
 New York Central Iron Works Co., Hagerstown, Md.  
 Peerless—Peerless Safety Cam & Device Mfg. Co., Chicago, Ill.  
 Petroleum Iron Works Co., Sharon, Pa.  
 Phoenix Iron Works Co., Meadville, Pa.  
 Quality—The Hell Co., Milwaukee, Wis.  
 Riverside Boiler Works, Inc., Cambridge, Mass.  
 Seafie, Wm. B. & Sons Co., Pittsburgh, Pa.  
 Star—Flint & Walling Mfg. Co., Kendallville, Ind.  
 Steel Tank & Products Corp., Chicago, Ill.  
 Struther-Wells Co., Warren, Pa.  
 Tirrill Gas Machine Lighting Co., New York, N. Y.  
 United—United Iron Works, Kansas City, Mo.  
 Wayne Oil Tank & Pump Co., Ft. Wayne, Ind.  
 Welded Steel Barrel Corp., Detroit, Mich.  
 Zelnicker, Walter A., Supply Co., St. Louis, Mo.

#### TANKS, TEMPERING.

Biggs Boiler Works Co., The, Akron, O.  
 Garwood Bronze & Iron Works, Garwood, N. J.  
 Koven, L. O. & Bro., Jersey City, N. J.  
 Weldex Mfg. Co., Richmond, Ind.

#### TANKS, TORGE.

Seafie, Wm. B. & Sons Co., Pittsburgh, Pa.

#### TANKS, URINAL FLUSHING.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Columbus Brass Co., Columbus, O.  
 Douglas Co., The John, Cincinnati, O.  
 Enameled Tank Co., Kalamazoo, Mich.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Ideal—Ideal Mfg. Co., Detroit, Mich.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Kohler—Kohler Co., Kohler, Wis.  
 Leclair Cabinet Works, Edwardsville, Ill.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Maddock's Sons Co., Thomas, Trenton, N. J.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Silo—Fleck Bros. Co., Philadelphia, Pa.  
 Watrous—Federal-Huber Co., Chicago, Ill.

#### TANKS, VACUUM.

Biggs Boiler Works Co., The, East Akron, O.  
 Seafie, Wm. B. & Sons Co., Pittsburgh, Pa.  
 Struthers-Wells Co., Warren, Pa.

#### TANKS, VULCANIZER.

D. M. Dillon Steam Boiler Works, Fitchburg, Mass.

#### TANKS, WAGON AND TRUCK, FOR OIL AND WATER.

Bushnell—Bushnell Pump Co., Bushnell, Ill.  
 Codd Co., E. J., Baltimore, Md.  
 Columbian Steel Tank Co., Kansas City, Mo.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Joliet—Amco Sales Corp., Chicago, Ill.  
 Kerrihard Co., The, Red Oak, Iowa.  
 Littleford Bros., Cincinnati, O.  
 Morrison Bros., Dubuque, Ia.  
 Pennsylvania Furnace & Stove Co., Warren, Pa.  
 Pfaudler Co., The, Rochester, N. Y.

♦ Powell, Wm., Co., The, Cincinnati, O.  
 Quality—The Hell Co., Milwaukee, Wis.  
 Seafie, Wm. B. & Sons Co., Pittsburgh, Pa.  
 Twin City—Minneapolis Steel & Machinery Co., Minneapolis, Minn.  
 Welded Steel Barrel Corp., Detroit, Mich.  
 Western Pipe & Steel Co., Los Angeles, Cal.

#### TANKS, WATER CLOSET, ALUMINUM, LOW AND HIGH.

Climax Sanitary Co., Detroit, Mich.  
 Maxco—Sherwood Brass Works, Detroit, Mich.

#### TANKS, WATER CLOSET, AUTOMATIC FLUSH.

Ajax—Chicago Granite Mfg. Co., Chicago, Ill.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Boston—Joseph H. Young Co., Boston, Mass.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Clow & Sons, James B., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 Hydraulic, Simplex, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Jenkins Mfg. Co., New York, N. Y.  
 Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Knott Mfg. Co., Ft. Wayne, Ind.  
 Koven, L. O. & Bro., Jersey City, N. J.  
 Leclair Cabinet Works, Edwardsville, Ill.  
 McCambridge Co., Philadelphia, Pa.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Park & McKay Co., The, Detroit, Mich.  
 Princess—Chicago Granite Mfg. Co., Chicago, Ill.  
 Seafie, Wm. B. & Sons Co., Pittsburgh, Pa.  
 Union Metal Works, Chelsea, Mass.  
 Watrous—Federal-Huber Co., Chicago, Ill.

#### TANKS, WATER CLOSET, COMPOSITION.

Porcelite—William Heap & Son, Grand Haven, Mich.

#### TANKS, WATER CLOSET, COPPER.

Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 Pfau—The Pfau Mfg. Co., Cincinnati, O.

#### TANKS, WATER CLOSET, ELECTRICALLY OPERATED.

Williams, W. A., San Francisco, Cal.

#### TANKS, WATER CLOSET, IRON.

Becker Mfg. Co., The, Marietta, O.  
 B. O. T.—American Sanitary Works, New York, N. Y.  
 Church Mfg. Co., C. F., Holyoke, Mass.  
 Concord Woodworking Co., Concord, N. H.  
 Delanyite—Coyne & Delany Co., Brooklyn, N. Y.  
 Easy-Put-On—Wm. Heap & Sons, Grand Haven, Mich.  
 Emery, William S., New York, N. Y.  
 Gaylord—Gaylord Sanitary Mfg. Co., Rochester, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 Impervio—The Trenton Potteries Co., Trenton, N. J.  
 Johnson, J. D., Co., Philadelphia, Pa. Trade Names—  
 Crown, Holly, Norwood, Saxon.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Juno—Chas. Millar & Son Co., Utica, N. Y.  
 Lipp, Louis, Co., Cincinnati, Ohio.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McLane Mfg. Co., Milford, N. H.  
 Miller Hubbard Mfg. Co., Sturgis, Mich.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Never Freeze—Fleck Bros. Co., Philadelphia, Pa.  
 Olmstead-Thomson Mfg. Co., The, New Britain, Conn.  
 Omala—The Galard Co., Newark, N. J. (white).  
 Pfau Mfg. Co., The, Cincinnati, O.  
 Philadelphia Sheet Metal & Wood Works, The, Philadelphia, Pa.  
 Pierce, Butler & Pierce Mfg. Corp., New York, N. Y.  
 Trade names—Factory, Heavy Duty, Randolph, Utility.  
 Relyo—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Sanitary Company of America, Linfield, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Standard Tank & Seat Co., Camden, N. J.  
 Star—The John Douglas Co., Cincinnati, O.  
 S. & S.—The Sanitary & Specialty Co., South Norwalk, Conn.  
 Union Sanitary Works, Noblesville, Ind.  
 VanArco—Van Arnan Mfg. Co., Fort Wayne, Ind.  
 Wolff Mfg. Co., Chicago, Ill.  
 Vitro—W. A. Case & Son Mfg. Co., Buffalo, N. Y.

#### TANKS, WATER CLOSET, IRON GALVANIZED.

American Foundry & Mfg. Co., St. Louis, Mo.  
 Electric Weld—John Wood Mfg. Co., Conshohocken, Pa.  
 Ideal Mfg. Co., Detroit, Mich.  
 Koven & Bro., L. O., New York, N. Y.  
 Lipp, Louis, Co., Cincinnati, Ohio.  
 Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.

**Sanitary Company of America**, Linfield, Pa.  
**Scaife, Wm. B., & Sons Co.**, Pittsburgh, Pa.  
**Wilkes Mfg. Co.**, S. Chicago, Ill.

#### TANKS, WATER CLOSET, LOW.

**Abingdon**—Abingdon Seat & Tank Mfg. Co., Abingdon, Ill.  
**American Wood Work Mfg. Co.**, Evansville, Ind.  
**Badger Line**—Plumbers Woodwork Co., Algoma, Wis.  
**Becker Mill Co.**, The, Marietta, O.  
**Berglass Mfg. Co.**, M. P., Brooklyn, N. Y.  
**B. O. T.**—American Sanitary Works, Trenton, N. J.  
**B. O. T.**—B. O. T. Mfg. Co., Trenton, N. J.  
**Century**—Century Sanitary Mfg. Co., Eastwood, N. Y.  
**Chicago Pottery Co.**, Chicago, Ill.  
**Church, C. F. Mfg. Co.**, Holyoke, Mass.  
**Coacord Woodworking Co.**, Concord, N. H.  
**Coyne and Delany Co.**, Brooklyn, N. Y.  
**Crown, Holly, Norwood, Saxon**—J. D. Johnson Co., Philadelphia, Pa.  
**Diamond**—A. Y. McDonald Mfg. Co., Dubuque, Ia.  
**Eichman Mfg. Co.**, J. C., Baltimore, Md.  
**Eureka**—Standard Tank & Seat Co., Inc., Camden, N. J.  
**Em-Ess**—The Meyer-Sniffen Co., New York, N. Y.  
**Fleck Bros. Co.**, Philadelphia, Pa. Trade names—  
 Aqueduct, Arctic, Colonial, Doric, Fabian, Mohican, Olympia, Pawnee, Peer Vitro, Roanoke, Stellar, Victor.  
**Glass Flush Float**—Wm. Heap & Sons, Grand Haven, Mich.

**Hajoca**—Haines, Jones & Cadbury Co., Philadelphia  
**Hale and Kilburn Co.**, Philadelphia, Pa.  
**Hedges & Bro.**, Newark, N. J.  
**Hogan**—The Hogan Mfg. Co., Hartford, Conn.  
**Impervio**—The Trenton Potteries Co., Trenton, N. J.  
**Ivory**—Standard Tank & Seat Co., Camden, N. J.  
**Jones Hollow Ware Co.**, Baltimore, Md.  
**Lipp Co.**, Louis, Cincinnati, O.  
**McLane Quality**—McLane Mfg. Co., Milford, N. H.  
**Maddocks, Thos., & Sons Co.**, Trenton, N. J. Trade names—  
 Madango, Madora.  
**Mercurio**—Pfau Mfg. Co., The, Cincinnati, Ohio.  
**Met-All**—Columbus Brass Co., Columbus, O.  
**Miller Hubbard Mfg. Co.**, Sturgis, Mich.  
**Mott Iron Works, The J. L.**, Trenton, N. J.  
**Nelson**—N. O. Nelson Mfg. Co., St. Louis, Mo.  
**Never Sweat**—John Heald, Jamestown, N. Y.  
**New Kazoo, Sweat-No Tank**—The Enameled Tank Co., Kalamazoo, Mich.  
**Olmstead-Thomson Mfg. Co.**, The, New Britain, Conn.  
**Omala**—The Galaro Co., Newark, N. J. (white).  
**Ontario, Queto**—Samuel Sloan & Co., Rochester, N. Y.  
**Peerless**—Peerless Tank & Seat Works, Evansville, Ind.

**Peerless Selling Co.**, Evansville, Ind.  
**Peerless**—Quinn Supply Co., Chicago, Ill.  
**Perfection Tank & Seat Co.**, Syracuse, N. Y.  
**Penn Enamel Sink Co.**, Indiana, Pa.  
**Pierce, Butler & Pierce Mfg. Corp.**, New York, N. Y.  
 Trade names—Pierce Luxo, Allison, Silent, Reverse, Union, Victor, Batter, Tremont.  
**Pfau Mfg. Co.**, Cincinnati, O.

**Quick Repair**—Heap & Sons, Wm., Grand Haven, Mich.  
**Relyo**—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
**Republic**—Stringer Bros. Foundry Co., Chicago, Ill.  
**Richmond Sanitary Mfg. Co.**, San Francisco, Cal.  
**Rival**—A. Y. McDonald Mfg. Co., Dubuque, Ia.  
**Riverside Foundry & Galvanizing Co.**, Kalamazoo, Mich.

**Sanitor**—Johns-Manville, Incorporated, New York, N. Y.

**Shwab Bros. Co.**, New York, N. Y.  
**Standard Sanitary Mfg. Co.**, Pittsburgh, Pa.  
**Union Sanitary Works**, Noblesville, Ind.  
**Universal**—McCambridge Co., Philadelphia, Pa.  
**VanArCo**—Van Arnam Mfg. Co., Fort Wayne, Ind.  
**Vitro**—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
**Walls, Owen & Stambach Co.**, Philadelphia, Pa.  
**Wolff Mfg. Co.**, Chicago, Ill.

#### TANKS, WATER CLOSET (NON-FREEZING).

**Electric Weld**—John Wood Mfg. Co., Conshohocken, Pa.

#### TANKS, WATER CLOSET, PORCELAIN AND VITREOUS CHINA.

**Abingdon Sanitary Mfg. Co.**, The, Abingdon, Ill.  
**Apollo**—Potomac Pottery Co., Keyser, W. Va.  
**Avon**—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
**B. O. T.**—American Sanitary Works, New York, N. Y.  
**Capoco**—Camden Pottery Co., Camden, N. J.  
**Charter Oak**—The Hogan Mfg. Co., Hartford, Conn.  
**Chicago Pottery Co.**, Chicago, Ill.  
**Cresco, Resesco, Triesco**—Samuel Sloan & Co., Rochester, N. Y.  
**Eljer Co.**, Cameron, W. Va. Trade names—Delta, Holland, Marion, Serpentine, Terrace, Altair, Shasta.  
**Flush-All**—Resolute Pottery Co., Trenton, N. J.  
**Haviland**—The Sanitary Mfg. Co., Hamilton, O.

**Hogan, Harmony**—The Hogan Mfg. Co., Hartford, Conn.

**Impervio**—Trenton Potteries Co., Trenton, N. J.  
**Ironsides Pottery Co.**, Bordentown, N. J.  
**Kalamazoo Sanitary Mfg. Co.**, Kalamazoo, Mich.  
**Kokomo Sanitary Pottery Co.**, Kokomo, Ind.  
**Lambertville Pottery Co.**, Lambertville, N. J.  
**Lapis**—Hercules Cement Product Co., San Francisco, Calif.

**Lipp, Louis, Co.**, Cincinnati, Ohio.  
**Maddock's Sons, John**, Trenton, N. J.  
**Maddock's Sons Co.**, Thomas, Trenton, N. J.  
**Manitov, Plymouth**—Samuel Sloan & Co., Rochester, N. Y.

**Miller, Chas. A. Co.**, Sturgis, Mich.  
**National Sanitary Co.**, The, Salem, O.  
**No Drip**—The Florentine Pottery Co., Cambridge, O.  
**Pacific Porcelain Ware Co.**, San Francisco, Cal.  
**Peerless Selling Co.**, Evansville, Ind.  
**Penn Pottery Co.**, Philadelphia, Pa.  
**Popular**—Resolute Pottery Co., Trenton, N. J.  
**Royal**—The Hogan Mfg. Co., Hartford, Conn.  
**Sesco**—The Sanitary Earthenware Specialty Co., Trenton, N. J.

**Standard Sanitary Pottery Co.**, The, Elizabeth, N. J.  
**Two Fired**—Trenton Potteries Co., Trenton, N. J.  
**Universal Sanitary Mfg. Co.**, New Castle, Pa.  
**Unicast**—Wolff Mfg. Co., Chicago, Ill.  
**Vitro**—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
**Walco**—C. D. Wallace & Co., Pittsburgh, Pa.  
**Wooster China**—Wooster Sanitary Co., The, Clarksburg, W. Va.  
**Zwermann**—Zwermann Company, Robinson, Ill.

#### TANKS, WATER CLOSET, PORCELAIN ENAMELED.

**Acme**—The Stuart & Paterson Co., Burlington, N. J.  
**Day-Ward Co.**, The, Warren, O.  
**Federal-Huber Co.**, Chicago, Ill.  
**Haynes Ruppel**—Hayes-Ruppel Mfg. Co., Grand Rapids, Mich.

**Iron City Sanitary Mfg. Co.**, Pittsburgh, Pa.  
**I. X. L.**—I. X. L. Pump & Mfg. Co., Philadelphia, Pa.

**Jones Hollow Ware Co.**, Baltimore, Md.  
**Kalamazoo Sanitary Mfg. Co.**, Kalamazoo, Mich.  
**Kohler**—Kohler Co., Kohler, Wis.  
**Liberty**—Humphries Mfg. Co., The, Mansfield, O.  
**National Sanitary Company**, The, Salem, O.  
**Rundle Mfg. Co.**, Milwaukee, Wis.  
**Standard Sanitary Mfg. Co.**, Pittsburgh, Pa.  
**Union Sanitary Mfg. Co.**, Noblesville, Ind.  
**United States Sanitary Mfg. Co.**, Pittsburgh, Pa.  
**Weiskittel & Son, A.**, Baltimore, Md.

#### TANKS, WATER CLOSET, STONE.

**Alberene Stone Co.**, Chicago, Ill.

#### TANKS, WATER METER TESTER.

**Ford**—Ford Meter Box Co., Wabash, Ind.  
**Scaife, Wm. B., & Sons Co.**, Pittsburgh, Pa.

#### TAPE AND WICKING, ASBESTOS.

**Allbestos Corporation**, Philadelphia, Pa.  
**Asbestos**—American Asbestos Co., Norristown, Pa.  
**Asbestos Fibre Spinning Co.**, North Wales, Pa.  
**Asbestos & Rubber Works of America**, New York.  
**Burgmann Asbestos & Packing Mills**, New York, N. Y.  
**Dominion Asbestos and Rubber Corp.**, New York.  
**General Asbestos & Rubber Co.**, Charleston, S. C.  
**Kern Commercial Co.**, New York, N. Y.  
**Mikesell Brothers Co.**, Chicago, Ill.  
**Perfection Tire & Rubber Co.**, Wabash, Ind.  
**Usaco**—United States Asbestos Co., Mannheim, Pa.  
**Vulcan**—Vulcan Asbestos Mfg. Co., Inc., New York, N. Y.  
**Waite-Wild Asbestos Co.**, Framingham, Mass.  
**Watson, H. F.**, Erie, Pa.

#### TAPE, GASKET.

**Dominion Asbestos & Rubber Corp.**, New York.  
**GARCo**, Perfect Adjustable—General Asbestos & Rubber Co., Charleston, S. C.

#### TAPE, INSULATING, OR FRICTION.

**Akron Black**—The B. F. Goodrich Co., Akron, O.  
**Black Diamond**—M. W. Dutton Co., Providence, R. I.  
**Brown, Bull Dog, Dauntless**—Boston Woven Hose & Rubber Co., Cambridge, Mass.  
**Canfield Rubber Co.**, The, Bridgeport, Conn.  
**Columbia, Never Drip**—Columbia Wax Works, New York, N. Y.  
**Erbestos Brake Lining Co.**, Philadelphia, Pa.  
**Goodrich White**—The B. F. Goodrich Rubber Co., Akron, Ohio.  
**Hydro-Proof**—Elkhart Rubber Works, Elkhart, Ind.  
**Indiana Rubber & Insulated Wire Co.**, Jonesboro, Ind.  
**J. M. Friction**—Johns-Manville, Inc., New York.  
**Leader, Magic, Service, Sterling, Tiger, Wizard**—Boston Woven Hose & Rubber Co., Boston, Mass.  
**Union Rubber & Asbestos Co.**, Trenton, N. J.



- ◆ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Holdtite, Corker, Ideal, Utility, Cleveland, XXX, Perfection, Grey Perfection, Peerless White, Walpole.
- Multibestos—Standard Woven Fabric Co., South Framingham, Mass.
- 23, Verifax—M. W. Dutton Co., Providence, R. I.

**TAPE, RUBBER AND TIRE.**

- Ganfeld Rubber Co., Bridgeport, Conn.
- Elkhart Rubber Works, Elkhart, Ind.
- ◆ United States Rubber Co., Mechanical Goods Div., New York. Trade names—Buckeye, 2XL, Marco, Neponset, Walpole, 400 Union 223.

**TAPE, SPINNING.**

- Lambeth Rope Corp., New Bedford, Mass.

**TAPES, LEATHER.**

- Lufkin Rule Co., Saginaw, Mich.

**TAPES, MEASURING, COTTON OR LINEN.**

- Bernz, Otto, Co., Newark, N. J.
- Eddy & Co., Geo. M., Brooklyn, N. Y.
- Keuffel & Esser Co., New York, N. Y.
- Metallic—Lufkin Rule Co., Saginaw, Mich. (metal warp).
- ◆ Starrett Co., The L. S., Athol, Mass.
- ◆ Sterling and Universal—Lufkin Rule Co., Saginaw, Mich.
- Weber, F., & Co., Philadelphia, Pa.

**TAPES, MEASURING, STEEL.**

- Aloe Instrument Co., A. S., St. Louis, Mo.
- Challenge, Germania, Reliable and Rival—Lufkin Rule Co., Saginaw, Mich.
- Dietzgen, Eugene, Co., Chicago, Ill.
- Eddy & Co., Geo. M., Brooklyn, N. Y.
- Gurley—W. & L. E. Gurley, Troy, N. Y.
- Keuffel & Esser Co., Hoboken, N. J.
- Lufkin Rule Co., Saginaw, Mich.
- ◆ Starrett Co., The L. S., Athol, Mass.
- Union Tool Co., Orange, Mass.

**TAPPERS, NUT.**

- Garvin Machine Co., New York, N. Y.
- Merriman—The H. B. Brown Co., East Hampton, Conn.
- Rodd's—Robt. J. Rodd, Cuyahoga Falls, O.
- San Francisco Engineering Co., San Francisco, Cal.

**TAPS, ADJUSTABLE.**

- Murchee Machine & Tool Co., Detroit, Mich.

**TAPS, BIT BRACE, BLACKSMITHS', BOILER-MAKERS', MACHINE SCREW THREAD, MACHINEISTS' HAND, MACHINE NUT, PATCH BOLT, FULLEY, STAYBOLT, TAPER, TAPPER, ETC.**

- ◆ Adamantine—American Tap & Die Co., Greenfield, Mass.
- Alvord Reamer & Tool Co., Millersburg, Pa.
- American Screw Co., Providence, R. I.
- Anderson Tool & Supply Co., W. H., Detroit, Mich.
- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Besly—Chas. H. Besly & Co., Chicago, Ill.
- Blancke, L. C., Co., Inc., New York, N. Y.
- ◆ Brubaker, W. L. & Bros., Millersburg, Pa.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- ◆ Carpenter Tap & Die Co., The J. M., Pawtucket, R. I.
- Cleveland Tap & Machine Mfg. Co., Cleveland, O.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- Easy-Cut—John Bath & Co., Inc., Worcester, Mass.
- ◆ G. T. D., Gun—Greenfield Tap & Die Corp., Greenfield, Mass.
- ◆ Gun—Greenfield Tap & Die Corp., Greenfield, Mass.
- Heco—H. B. Eaton & Co., Boston, Mass.
- Hoopes & Townsend Co., Philadelphia, Pa.
- Keystone—Keystone Reamer & Tool Co., Millersburg, Pa.
- Morse Twist Drill & Machine Co., New Bedford, Mass.
- Murchee Machine & Tool Co., Detroit, Mich.
- Polk & Son, A. J., Millersburg, Pa.
- Pratt & Whitney Co., Hartford, Conn.
- Reed & Prince Mfg. Co., Worcester, Mass.
- Reliff & Nestor Company, Lykens, Pa.
- Reliable—Conant & Donelson Co., Conway, Mass.
- Reliance—The Foote-Burt Co., Cleveland, O.
- Rochester Machine Screw Co., Rochester, N. Y.
- Russell Quality—The Russell Mfg. Co., Greenfield, Mass.
- ◆ Shield Brand—The Standard Tool Co., Cleveland, O.
- Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.
- ◆ Standard Tool Co., Cleveland, O.
- Superior Tap Co., Charleston, N. H.
- Thistle—Winter Bros. Co., Wrentham, Mass.

**TAPS, BRASS TUBING THREAD.**

- Heco—H. B. Eaton & Co., Boston, Mass. (2 futa.)
- ◆ Hercules, G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Russell—Russell Mfg. Co., Greenfield, Mass.
- Walworth Mfg. Co., Boston, Mass.

**TAPS, COLLAPSIBLE.**

- Errington Mechanical Laboratory, New York, N. Y.
- ◆ Geometric Tool Co., The, New Haven, Conn.
- Modern—Modern Tool Co., Erie, Pa.
- M. E. C.—Manufacturers Equipment Co., Chicago, Ill.
- ◆ Murchee—Murchee Machine & Tool Co., Detroit, Mich.
- Namco—National Acme Co., Cleveland, O.
- Pipe Machinery Co., Cleveland, Ohio.
- Rickert-Shafer Co., Erie, Pa.
- Victor Tool Co., Waynesboro, Pa.

**TAPS, EXPANDING.**

- Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Mansfield, Mass.
- Modern Tool & Machine Works, Inc., Newark, N. J.

**TAPS, HOR.**

- American Tap & Die Co., Greenfield, Mass.
- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Carpenter Tap and Die Co., J. M., Pawtucket, R. I.
- Card Mfg. Co., S. W., Div. of Union Twist Drill Co., Mansfield, Mass.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Russell—Russell Mfg. Co., Greenfield, Mass.

**TAPS, INSERTED BLADE.**

- Mergenthaler Co., The, Baltimore, Md.

**TAPS, MUD PLUG OR WASHOUT.**

- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Pratt & Whitney Co., Hartford, Conn.

**TAPS, PIPE.**

- Adamantine—American Tap & Die Co., Greenfield, Mass.
- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- Boust, A. C., Northumberland, Pa.
- Brubaker & Bros., W. L., Millersburg, Pa.
- ◆ Butterfield & Co., Div. Union Twist Drill Co., Derby Line, Vt.
- Card Mfg. Co., S. W., Div. Union Twist Drill Co., Mansfield, Mass.
- Carpenter Tap & Die Co., J. M., Pawtucket, R. I.
- ◆ Cleveland Twist Drill Co., The, Cleveland, O.
- Crane Co., Chicago, Ill.
- ◆ Detroit Twist Drill Co., Detroit, Mich.
- ◆ Electric—Champion Blower & Forge Co., Lancaster, Pa.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.
- Hollands—Hollands Mfg. Co., Erie, Pa.
- Mueller Mfg. Co., H., Decatur, Ill.
- Pratt & Whitney Co., Hartford, Conn.
- Reliable—Conant & Donelson Co., Conway, Mass.
- Russell—Russell Mfg. Co., Greenfield, Mass.
- Saunders—D. Saunders & Sons, Inc., Yonkers, N. Y.
- Simplex High Speed—Simplex Tool & Supply Co., Boston, Mass.
- ◆ Standard Tool Co., Cleveland, O.
- Thistle—Winter Bros. Co., Wrentham, Mass.
- Victor—Emmert Mfg. Co., Waynesboro, Pa. (collapsible).
- ◆ Walworth Mfg. Co., Boston, Mass.

**TAPS, SERIAL.**

- ◆ Wells—Greenfield Tap & Die Corp., Greenfield, Mass.

**TAPS, STOVE BOLT.**

- ◆ Bay State—Bay State Tap & Die Co., Mansfield, Mass.
- ◆ G. T. D.—Greenfield Tap & Die Corp., Greenfield, Mass.

**TAP, CRUDE AND REFINED.**

- ◆ Bethlehem Steel Co., Bethlehem, Pa.
- Du Pont Chemical Works, New York, N. Y. (for coating cast iron soil pipes).
- Watson, H. F., Erie, Pa.

**TARPAULINE.**

- Consolidated Rubber Co., Trenton, N. J.
- Dafoe-Eustice Co., Detroit, Mich.
- Royal—Allied Belting Co., Greenville, O.



**TEES, BASIN VENT.**

- American—American Sanitary Mfg. Co., Abingdon, Ill.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Haydensville Co., Haydensville, Mass.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 Loyal Brass Co., Cleveland, O.  
 Monarch Brass Co., Cleveland, O.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 Romaco—Robertshaw Mfg. Co., Youngwood, Pa.  
 ♦ United Brass Mfg. Co., Cleveland, O.

**TEES, BRANCH, WROUGHT.**

(See "Fittings, Pipe, Cast Iron" and "Headers and Manifolds, Pipe.")

**TEES, BRASS.**

(See "Fittings, Pipe, Brass.")

**TEES, CAST IRON.**

(See "Fittings, Pipe, Cast Iron.")

**TEES, CAST IRON, LONG TURN.**

- Illinois Malleable Iron Co., Chicago, Ill.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, CROSSOVER.**

- Detroit Malleable & Brass Works., Detroit, Mich.  
 Essex Foundry, Newark, N. J.  
 Flagg & Co., Stanley G., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, DRAIN OR DRIP.**

Pittsburgh Valve & Fittings Co., Barberton, O.

**TEES, DROP, ECCENTRIC, FOUR WAY, ETC.**

(See also "Fittings, Pipe, Malleable" and "Fittings, Pipe, Cast Iron.")

- C.—Crane Co., Chicago, Ill.  
 Essex Foundry, Newark, N. J.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, HYDRAULIC.**

- Kaltenthaler, H. J., Philadelphia, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, LAUNDRY TRAY.**

- Detroit Brass and Malleable Works, Detroit, Mich.  
 Fee & Mason Mfg. Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**TEES AND CROSSES, PARTITION, M. I.**

Pittsburgh Valve & Fittings Co., Barberton, O.

**TEES, RANGE BOILER.**

- Detroit Brass and Malleable Works, Detroit, Mich.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson—Jefferson Union Co., Lexington, Mass.  
 Lawler—Lawler Regulator Co., New York, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Stack Non By Pass—Stack Heater Co., Worcester, Mass.

**TEES, REDUCING.**

(See "Fittings, Pipe, Cast Iron," "Brass" and "Malleable.")

**TEES, SERVICE.**

- C.—Crane Co., Chicago, Ill.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, SIDE OUTLET.**

- Acheson Mfg. Co., Braddock, Pa.  
 Essex Foundry, Newark, N. J.  
 ♦ Jefferson—Jefferson Union Co., Lexington, Mass.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ McRae & Roberts Co., The, Detroit, Mich.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, SUCTION.**

McDaniel—Watson & McDaniel Co., Philadelphia, Pa.

**TEES, TEST, CAST IRON.**

Blake—Blake Specialty Co., Rock Island, Ill.  
 Sanitary Company of America, Linfield, Pa.

**TEES, UNION.**

- Dart Mfg. Co., E. M., Providence, R. I.  
 Flagg & Co., Stanley G., Philadelphia, Pa.  
 Grip—Ware Coupling & Nipple Co., Ware, Mass.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kewanee—National Tube Co., Pittsburgh, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Rhode Island—Rhode Island Fittings Co., Hills Grove, R. I. (bronze seat).  
 Richardson, Edro, Brass Co., Baltimore, Md.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TEES, VENT.**

- Frost Mfg. Co., The, Kenosha, Wis.  
 ♦ United Brass Mfg. Co., Cleveland, O.

**TEES, WATER BACK.**

- Beekman—Fee & Mason Mfg. Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

**TENTS, ROLL, DROP FORGED.**

Johnson Hollow Ground—Willmot Engineering Co., Hazleton, Pa.

**TEETH, SAW.**

- ♦ Hoe—R. Hoe & Co., New York.

**TELEPHONE EQUIPMENT, FACTORY AND MINE.**

- Automatic Electric Co., Chicago, Ill.  
 Hepburn Telephone Mfg. Co., Chicago, Ill.  
 Klaxophone—Klaxon Co., Newark, N. J.  
 Mine Safety Appliances Co., Pittsburgh, Pa.  
 Pettes & Randall Co., New York, N. Y.  
 Premier—Premier Electric Co., Chicago, Ill.  
 Stromberg—Carlson Telephone Mfg. Co., Chicago, Ill.  
 Western Electric Co., Inc., Chicago, Ill.

**TELLTALE, ELECTRIC, FOR ROPE TRANSMISSION.**

Dodge Sales & Engineering Co., Mishawaka, Ind.

**TELLURIUM.**

American Smelting & Refining Co., New York, N. Y.

**TEMPERATURE CONTROL.**

- Foxboro Co., Inc., Foxboro, Mass.  
 Powers Regulator Co., Chicago, Ill.

**TEMPLATES FOR DRILLING FLANGES.**

- Essex Foundry, Newark, N. J.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

**TENSIONS AND FRICTIONS, CORK INSERT.**

Cork Insert Co., Boston, Mass.

**TESTERS, ELASTIC CIRCUIT.**

- ♦ Du Pont, E. I., de Nemours & Co., Wilmington, Del.

**TESTERS, BOILER TUBE.**

Watson-Stillman Co., New York.

**TESTERS, BOILER WATER.**

Erfmann—Neptunus Supply Co., New York.

**TESTERS, BOND.**

Roller-Smith Co., New York, N. Y.

**TESTERS, CENTER.**

Ideal—Johnson & Miller, New York, N. Y.  
 Starrett Co., The L. S., Athol, Mass.

**TESTERS OR TEST PUMPS, GAGE.**

- ♦ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashcroft—Ashcroft Mfg. Co., New York, N. Y.  
 Ashton Valve Co., The, Boston, Mass.  
 ♦ Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Dead Weight—Star Brass Mfg. Co., Boston, Mass.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Shaw's—Quimby Engineering Co., Philadelphia, Pa.  
 U. S. Standard—United States Gauge Co., New York, N. Y.

**TESTERS, LUMBER, FOR MOISTURE.**

Grand Rapids Vapor Kiln Co., Grand Rapids, Mich.

**TESTERS, PNEUMATIC TIRE.**

United States Gauge Co., New York.

**TESTERS, SAND.**

Universal—Kolesch & Co., New York.

**TESTERS, WATER METER.**

Clark—H. W. Clark Co., Mattoon, Ill.  
Ford—Ford Meter Box Co., Wabash, Ind.  
Manograph Recorder—Waterworks Equipment Co., New York.  
Mueller Mfg. Co., H., Decatur, Ill.

**TRIALPOTASIMETERS.**

National Gauge Co., Brooklyn, N. Y.

**THEODOLITES.**

Ainsworth, Wm., & Sons, Denver, Colo.

**THERMOCOUPLES.**

Pyods—Wilson-Maeulen Co., New York, N. Y.

**THERMOFANS, FOR VENTILATING & HEATING.**

S. & K.—Schutte & Koerting Co., Philadelphia, Pa.

**THERMOPIERS.**

Belvac—Consolidated Eng. Co., Chicago, Ill.

**THERMOMETERS.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Ashton Valve Co., The, Boston, Mass.
- Beaton & Cadwell Mfg. Co., New Britain, Conn.
- Bristol Co., Waterbury, Conn.
- Brown—Brown Instrument Co., Philadelphia, Pa.
- Columbia—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Freas, Francis L., Glass Works, Inc., Conshohocken, Pa.
- Genco—General Scientific Instrument Co., North Philadelphia, Pa.
- Griebel Instrument Co., Carbondale, Pa. (for laboratory, factory, acid plants, ice machines, etc.).
- Heraeus—Charles Engelhard, New York, N. Y.
- H. & M.—The Hohmann & Maurer Mfg. Co., Rochester, N. Y.
- Hohmann Type—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.
- Ideal—American Radiator Co., Chicago, Ill.
- Improved Appliance Co., Brooklyn, N. Y.
- Industrial Instrument Co., The, Foxboro, Mass.
- Moeller, A. E., Brooklyn, N. Y.
- National Gauge Co., Brooklyn, N. Y.
- National Gauge & Equipment Co., La Crosse, Wis. (distance type).
- Parks Engineering Co., Philadelphia, Pa.
- Pierce Butler & Pierce Mfg. Corp., Valve Gauge Div., New York, N. Y.
- Precision Instrument Co., Detroit, Mich.
- Princo—Precision Thermometer & Instrument Co., Philadelphia, Pa.
- Queen-Gray Co., Philadelphia, Pa.
- Sarco—Sarco Co., Inc., New York, N. Y.
- Scientific Instrument Co., Detroit, Mich.
- Scimatco—Scientific Materials Co., Pittsburgh, Pa.
- Scott, C. P., & Sons, Buffalo, N. Y.
- Shaw's—Quimby Engineering Co., Philadelphia.
- Silver—Silver & Co., Brooklyn, N. Y.
- Tycos—Taylor Instrument Companies, Rochester, N. Y.
- Ustco Thermometer Co., Inc., New York, N. Y.
- Unico—Union Thermometer Co., Inc., New York, N. Y.
- United States Gauge Co., New York, N. Y.
- Wagner Glass Works, Camden, N. J.
- Weiss, A. A., & Son, Brooklyn, N. Y.
- Weinhagen & Hespe, New York.
- Zaubitz, August, New York, N. Y.

**THERMOMETERS, BATH.**

Crescent—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Mott Iron Works, The J. L., Trenton, N. J.  
Pierce, Butler & Pierce Mfg. Corp., New York, N. Y.  
Silver Co., Brooklyn, N. Y.  
Union Thermometer Co., Inc., New York, N. Y.

**THERMOMETERS, CHEMICAL.**

Unico—Union Thermometer Co., Inc., New York, N. Y.  
Pierce, Butler & Pierce Mfg. Corp., Syracuse, N. Y.

**THERMOMETERS, DIAL.**

Crescent—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Industrial Instrument Co., The, Foxboro, Mass.  
National Gauge & Equipment Co., La Crosse, Wis.  
Reform—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Standard Thermometer Co., Boston, Mass.

Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
Taylor Instrument Co., Rochester, N. Y.  
Union Thermometer Co., Inc., New York, N. Y.

**THERMOMETERS, FEED WATER HEATER.**

Bristol's—Bristol Co., The, Waterbury, Conn.  
National Gauge & Equipment Co., La Crosse, Wis.  
Taylor Instrument Co., Rochester, N. Y.  
Union Thermometer Co., Inc., New York, N. Y.

**THERMOMETERS, FLUE GAS AND AIR DUCT.**

Taylor Instrument Co., Rochester, N. Y.

**THERMOMETERS, HOT WATER.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Bristol's—Bristol Co., The, Waterbury, Conn.
- Crescent—The Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Capitol—U. S. Radiator Corp., Detroit, Mich.
- Edelman—E. Edelman & Co., Chicago, Ill.
- Industrial Instrument Co., The, Foxboro, Mass.
- Marsh & Co., Jas. P., Chicago, Ill.
- National Gauge Co., Brooklyn, N. Y.
- National Gauge & Equipment Co., La Crosse, Wis.
- National—National Steam Specialty Co., Chicago, Ill.
- Penn—The Penn Engineering Co., Philadelphia, Pa.
- Pierce, Butler & Pierce Mfg. Corp., Syracuse, N. Y.
- Standard—Standard Thermometer Co., Boston, Mass.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Union Radiator Co., Johnstown, Pa.
- Union Thermometer Co., Inc., New York.
- U. S. Standard—United States Gauge Co., New York, N. Y.

**THERMOMETERS, HOT WELL.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Crescent—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Union Thermometer Co., Inc., New York.

**THERMOMETERS, LONG DISTANCE.**

Brown Instrument Co., The, Philadelphia, Pa.

**THERMOMETERS, OVEN.**

Bristol's—Bristol Co., The, Waterbury, Conn.  
Crescent, Reform—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Foxboro Co., Inc., The, Foxboro, Mass.  
Improved Appliance Co., Brooklyn, N. Y.  
National Gauge & Equipment Co., La Crosse, Wis.  
Pierce, Butler & Pierce Mfg. Corp., Syracuse, N. Y.  
Union Thermometer Co., Inc., New York.

**THERMOMETERS, RECORDING.**

Bristol's—The Bristol Co., Waterbury, Conn.  
Brown—Brown Instrument Co., Philadelphia, Pa.  
Columbia—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Foxboro Co., Inc., The, Foxboro, Mass.  
Grand Rapids Vapor Kiln Co., Grand Rapids, Mich.  
Leeds & Northrup Co., Philadelphia, Pa.  
Marsh & Co., Jas. P., Chicago, Ill.  
Precision Thermometer & Instrument Co., Philadelphia, Pa.  
Sarco—Sarco Co., Inc., New York, N. Y.  
Standard—Standard Thermometer Co., Boston, Mass.  
Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
Thwing Instrument Co., Philadelphia, Pa.  
Tycos—Taylor Instrument Companies, Rochester, N. Y.

**THERMOMETERS, SHOWER BATH.**

Crescent—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
H & M—Hohmann & Maurer Mfg. Co., Rochester, N. Y.  
Mott Iron Works, The J. L., Trenton, N. J.  
Pierce, Butler & Pierce Mfg. Corp., Syracuse, N. Y.  
Speakman Co., Wilmington, Del.  
Smith, E. C., Mfg. Co., Chicago, Ill.  
Union Thermometer Co., Inc., New York.

**THERMOMETERS, STEAM PIPE.**

Bristol's—Bristol Co., The, Waterbury, Conn.  
Crescent Reform—Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
Foxboro Co., Inc., The, Foxboro, Mass.  
Marsh, J. P., Co., Chicago, Ill.  
Pierce, Butler & Pierce Mfg. Corp., Syracuse, N. Y.  
Union Thermometer Co., Inc., New York.

**THERMOMETERS, SUPERHEATED STEAM**

Taylor Instrument Co., Rochester, N. Y.

**THERMOMETERS, THERMOSTAT.**

Bristol's—The Bristol Co., Waterbury, Conn.  
Foxboro Co., Inc., The, Foxboro, Mass.

**THERMOSTATS.**

Acton—John Acton, Brooklyn, N. Y.  
 Andrews—Andrews Heating Co., Minneapolis, Minn.  
 Arco—American Radiator Co., Chicago, Ill.  
 Beers—I. Frank Beers Thermostat Co., Rochester, N. Y.  
 Consolidated Car Heating Co., Albany, N. Y. (for electric cars.)  
 Davy-Kidde & Co., New York, N. Y.  
 Equitherm Control Corp., Brooklyn, N. Y.  
 Freas—Thermo Electric Instrument Co., Newark, N. J.  
 Garrett, W. D., & Co., New York, N. Y.  
 Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
 Hired Man—Andrews Heating Co., Minneapolis, Minn.  
 Jarvis Thermoflash—B. Ryan Company, New York, N. Y.  
 Jewell—Jewell Mfg. Co., Auburn, N. Y.  
 Johnson—Johnson Service Co., Milwaukee, Wis.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Lawson—Lawson Mfg. Co., Pittsburgh, Pa.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Marvel—American Thermostat Co., Newark, N. J.  
 Minneapolis—Minneapolis Heat Regulator Co., Minneapolis, Minn.  
 National Regulator Co., Chicago, Ill.  
 Pittsburgh Water Heater Co., Pittsburgh, Pa.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Precision Thermometer & Instrument Co., Philadelphia, Pa.  
 Robertshaw—Robertshaw Mfg. Co., Youngwood, Pa.  
 Ruud—Ruud Mfg. Co., Pittsburgh, Pa.  
 Ryan, B. & Co., New York, N. Y. (for water heaters).  
 Sargo Engineering Co., New York, N. Y.  
 Standard—Standard Thermometer Co., Boston, Mass.  
 Swan—Klipfel Mfg. Co., Chicago, Ill.  
 Witt, G. E., Co., Inc., San Francisco, Cal.  
 Wolverine—Wolverine Temperature Regulator Co., Marshall, Mich.  
 Yoder—Yoder-Thomas Mfg. Co., Cleveland, O.

**THIMBLES, BIRE.**

◆ Hays Mfg. Co., Erie, Pa.

**THIMBLES, PIPE.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Marine Hardware Equipment Co., South Portland, Me.  
 Mills Brass Co., W. A., Port Chester, N. Y.  
 Modern Iron Works, Quincy, Ill.  
 Prentice, Wilson—Prentice Co., L. H., Chicago, Ill.  
 Sanitary Company of America, Linfield, Pa.

**THIMBLES, SWEEL.**

Sanitary Company of America, Linfield, Pa.

**THIMBLES, WIRE ROPE.**

Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Macomber & Whyte Rope Co., Kenosha, Wis.  
 Marine Hardware Equipment Co., South Portland, Me.  
 Laughlin, Thos., Co., The, Portland, Me.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**THREADERS, NIPPLE, CHILING.**

◆ Armstrong Mfg. Co., The, Bridgeport, Conn.

**THREADERS, PIPE, RATCHET.**

(See also Stocks and Dies.)

◆ Beaver—The Borden Co., Warren, O.  
 ◆ Toledo—Toledo Pipe Threading Machine Co., Toledo, O.

**TIES, BALE.**

Alsteel—Alsteel Mfg. Co., Battle Creek, Mich.

**TIES, CONCRETE, FORM.**

Bostwick—The Bostwick Steel Lath Co., Niles, O.  
 Richmond—Richmond Screw Anchor Co., New York, N. Y.

**TIES, MINE, STEEL.**

Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.

**TIGHTENERS, BELT.**

(See also "Machinery, Power Transmission.")

(For clamps, see "Clamps, Belt.")

American Tool & Machine Co., Boston, Mass.  
 American—American Saw Mill Mach'y Co., Hackettstown, N. J.  
 Barnard & Leas Mfg. Co., Moline, Ill.  
 Barry—Barry Co., Muscatine, Ia.  
 ◆ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Eastwood Co., Benjamin, Paterson, N. J.  
 Falls Clutch & Machine Co., Cuyahoga Falls, Ohio.  
 Falls Rivet & Machinery Co., Cuyahoga Falls, O.  
 ◆ Hill Clutch Co., The, Cleveland, O.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Lenix—F. L. Smith & Co., New York, N. Y.

Link-Belt Company, Chicago and Philadelphia.  
 ◆ Medart Patent Pulley Co., St. Louis, Mo.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Minster Machine Co., The, Minster, O.  
 Naylor Bros., Peekskill, N. Y.  
 Nordyke & Marmon Co., Indianapolis, Ind.  
 Pyott Co., Chicago, Ill.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Trempe's Automatic, Berry Universal—O. V. Hooker & Son, St. Johnsbury, Vt.  
 ◆ Wood's Sons Co., T. B., Chambersburg, Pa.  
 Wolf Co., The, Chambersburg, Pa.

**TILE, ALUMINUM SAFETY.**

◆ Norton Co., Worcester, Mass.

**TILE, BOILER, FURNACE, LOCOMOTIVE AND STOCKS.**

Laclede-Christy Clay Products Co., St. Louis, Mo.

**TIMBERS, MINE, STEEL.**

Carnegie Steel Co., Pittsburgh, Pa.

**TIN, BAR.**

Fleck Bros. Co., Philadelphia, Pa.  
 Lissberger, Marks, & Son, Inc., Long Island City, N. Y.  
 National Lead Co., New York, N. Y.  
 United States Reduction Co., East Chicago, Ind.

**TIN, BLOCK.**

◆ Hoyt Metal Co., St. Louis, Mo.  
 Lissberger, Mark, & Son, Inc., Long Island City.

**TIN, COKE.**

◆ American Sheet & Tin Plate Co., Pittsburgh, Pa.

**TIN, PHOSPHOR.**

Ajax—The Ajax Metal Co., Philadelphia, Pa.  
 Crescent Phosphorized Metal Co., The, Philadelphia.  
 Imperial—Empire Metal Co., Syracuse, N. Y.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 Metallic Phosphoro—The New Era Mfg. Co., Kalama-zoo, Mich.  
 Richards & Co., Inc., Boston, Mass.  
 Stanley Process—United American Metals Corp., Brooklyn, N. Y.  
 Wizard—S. Birkenstein Sons, Inc., Chicago, Ill.

**TIN, FIG.**

Ajax Metal Co., Philadelphia, Pa.  
 American Smelters Securities Co., San Francisco, Cal.  
 Atlantic Iron & Metal Co., Cleveland, O.  
 Brady Brass Co., Jersey City, N. J.  
 Bruce and Cook, New York, N. Y.  
 Canfield & Sons Co., M. C., Newark, N. J.  
 Columbia Smelting & Refining Co., New York, N. Y.  
 Detroit Metal Refining Co., Detroit, Mich.  
 Gilbert, A., & Sons Brass Foundry Co., St. Louis, Mo.  
 Illinois Smelting & Refining Co., Chicago, Ill.  
 Great Western Smelting & Refining Co., Chicago, Ill.  
 Lehman Bros., Hoboken, N. J.  
 Lissberger & Son, Inc., Marks, Long Island City, N. Y.  
 ◆ Michigan Smelting & Refining Co., Detroit, Mich.  
 Dayton Rubber Mfg. Co., Dayton, O.  
 Diamond Rubber Co., Akron, O.  
 National Lead Co., New York, N. Y.  
 North American Copper Co., New York  
 Sandoval Zinc Co., Chicago, Ill.  
 Standard Smelting & Refining Co., New York, N. Y.  
 United Smelting & Aluminum Co., Inc., New Haven, Conn.  
 Union Smelting & Refining Co., Inc., Newark, N. J.  
 United States Reduction Co., East Chicago, Ind.

**TIN, PLATE.**

◆ American Sheet & Tin Plate Co., Pittsburgh, Pa.  
 American Smelters Securities Co., San Francisco, Cal.  
 ◆ Bethlehem Steel Co., Bethlehem, Pa.  
 Bruce and Cook, New York, N. Y.  
 De Forest Sheet & Tin Plate Co., Niles, O.  
 Eller's—The Eller Mfg. Co., Canton, O.  
 Florence, Minerva, Palma, Pisa, Stella, Sylvia—Merchant & Evans Co., Philadelphia, Pa.  
 ◆ Hoyt Metal Co., St. Louis, Mo.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.  
 Target & Arrow—N. & G. Taylor Co., Philadelphia.  
 Trumbull Steel Company, The, Warren, Ohio.  
 Wheeling Steel Corporation, Wheeling, W. Va.

**TINNING FOR THE TRADE.**

Malleable Iron Fittings Co., Branford, Conn.  
 Standard Galvanizing & Mfg. Co., Cleveland, O.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**TIPPLES, COAL.**

Bartlett & Snow Co., The C. O., Cleveland, O.  
 ◆ Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.

Morrow Mfg. Co., Wellston, Ohio.  
 Ritter-Conley Co., Pittsburgh, Pa.  
 Scottsdale—Scottsdale Machine & Mfg. Co., Scottsdale, Pa.

#### TIPS, GAS.

Alco, Auto, E. H., Jumbo—American Lava Ca., Chattanooga, Tenn.  
 Crescent, Von Schwarz—M. Kirchberger Co., New York, N. Y.  
 E. H., New Market—Colonial Mfg. Co., Chattanooga, Tenn.  
 Lava—D. M. Steward Mfg. Co., Chattanooga, Tenn.

#### TIRES, AUTOMOBILE.

Alabama, Defiance, Faust, Hero, Empire, Perfect—Empire Tire & Rubber Corp., Trenton, N. J.  
 Diamond Rubber Co., Inc., Akron, Ohio.  
 Fiske Bros. Refining Co., New York.  
 Firestone Tire & Rubber Co., Akron, O.  
 General Tire & Rubber Co., Akron, O.  
 Globe Rubber Tire Mfg. Co., Trenton, N. J.  
 Goodyear Tire & Rubber Co., Akron, O.  
 Goodrich, B. F., Rubber Co., Akron, O.  
 Gutta Percha & Rubber Mfg. Co., New York.  
 Hardman Tire & Rubber Co., New York.  
 Kelly-Springfield Tire Co., Akron, O.  
 McCreary Tire & Rubber Co., Indiana, Pa.  
 McGraw Tire & Rubber Co., The East Palestine, O.  
 Mansfield Tire & Rubber Co., Mansfield, O.  
 Marathon Tire & Rubber Co., Cuyahoga Falls, O.  
 Mason Tire & Rubber Co., Kent, O.  
 Michelin Tire Co., Milltown, N. J.  
 Miller Rubber Co., Akron, O.  
 Mohawk Rubber Co., Akron, O.  
 Pennsylvania Rubber Co., Jeannette, Pa.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Republic Rubber Co., Youngstown, O.  
 Skidlock—Portage Tire & Rubber Co., Barborton, O.  
 Standard Four Tire Co., Keokuk, Iowa.  
 Star Rubber Co., Akron, O.  
 Thermoid—Thermoid Rubber Co., Trenton, N. J.

#### TIRES, RUBBER, TRUCK WHEEL.

◆ Boston Belting Co., Boston, Mass.  
 ◆ Cincinnati Rubber Mfg. Co., The Cincinnati, O.  
 Dominion Asbestos and Rubber Corp., New York.  
 Federal Rubber Co., Cudahy, Wis.  
 Goodrich—B. F. Goodrich Co., Akron, O.  
 Hewitt Rubber Co., Buffalo, N. Y.

#### TOLUOL.

◆ Bethlehem Steel Co., Bethlehem, Pa.

#### TONGS, BLACKSMITHS'.

◆ Champion Tool Co., Meadville, Pa.  
 ◆ Horseshoe—Stanley Rule & Level Co., Atha Dept., New Britain, Conn.  
 Milwaukee Tool & Forge Co., Milwaukee, Wis.  
 Potts, D. H., Co., Lancaster, Pa.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Vaughan & Rushnell Mfg. Co., Chicago, Ill.  
 Verona Tool Works, Pittsburgh, Pa.  
 Warren Tool & Forge Co., The, Warren, Ohio.

#### TONGS, CHAIN PIPE.

(See "Wrenches, Pipe Chain.")

#### TONGS, CLINKER, HEATING BOILER & FURNACE.

Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

#### TONGS CRUCIBLE.

Anderson Tool & Supply Co., W. H., Detroit, Mich.  
 Clark, W. J., Co., Salem, O.  
 Delta—New Jersey Foundry & Machine Co., New York.  
 Obermayer, S. Co., The, Cincinnati, Ohio.  
 Oliver, W. W. Mfg. Co., The, Buffalo, N. Y.  
 Paxson Co., J. W., Philadelphia, Pa.

#### TONGS, ICE.

Heartley Machine, Variety Iron & Tool Works, Toledo, O.

#### TONGS AND GRAB HOOKS, LOADING AND SKIDDING.

Isaacson, L. G., Co., Aberdeen, Wash.  
 Lightning—Franklin Tool Works, Seattle, Wash.  
 Verona Tool Works, Pittsburgh, Pa.

#### TONGS, OIL WELL.

Dunn—Dunn Mfg. Co., Oxnard, Calif.  
 Jarecki—Jarecki Mfg. Co., Erie, Pa.

#### TONGS, PIPE.

Ashcroft—The Ashcroft Mfg. Co., New York, N. Y.  
 Darling—The Darling Valve & Mfg. Co., Ltd., Wilmsport, Pa.

Ideal—Krossschell Bros. Co., Chicago, Ill.  
 Jumbo Mfg. Co., Pittsburgh, Pa.  
 ◆ Walworth Mfg. Co., Boston, Mass.  
 Ward-Love Pump Corp., Rockford, Ill.  
 ◆ Williams, J. H. & Co., Brooklyn, N. Y.

#### TONGS, PIPE LOWERING.

Mueller Mfg. Co., H., Decatur, Ill.

#### TONGS, RADIATOR CARRYING.

Erl—E. R. Lumsden, Indiana, Pa.

#### TONGS, RAIL AND TIE.

Klein-Logan Co., Pittsburgh, Pa.  
 Verona Tool Works, Pittsburgh, Pa.  
 Warren Tool & Forge Co., The, Warren, Ohio.

#### TONGS, RIVET.

Verona Tool Works, Pittsburgh, Pa.  
 Vulcan Tool Mfg. Co., The, Quincy, Mass.

#### TONGS, SHEET & TIN MILL.

Quickwerk—The Warren Tool & Forge Co., Warren, O.

#### TOOLMAKER'S KNEE.

Simplex Tool Co., Woonsocket, R. I.

#### TOOLS AND KITS, AUTOMOBILE.

Auto-Lad—Alsteel Mfg. Co., Battle Creek, Mich.  
 Buffum Tool Co., Louisiana, Mo.  
 Champion Tool Co., Meadville, Pa.  
 Dyer, G. H. Co., The, Cambridge, Mass.  
 Excelsior—H. J. Bartle Mfg. Corp., Troy, N. Y.  
 Harold Tool & Forge Co., Columbiana, Ohio.  
 Herbrand Co., The, Fremont, Ohio.  
 Improved Gauge Mfg. Co., Syracuse, N. Y.  
 Kraeuter & Co., Inc., Newark, N. J.  
 Marcy Tool Works, The, Putnam, Conn.  
 McKaig—McKaig Drop Forge Co., Buffalo, N. Y.  
 Mossberg, Frank Co., Attleboro, Mass.  
 Mound—Mound Tool Co., St. Louis, Mo.  
 National Tool Co., Brooklyn, N. Y.  
 Phoenix, Turret, Phoenix Mfg. Co., Eau Claire, Wis.  
 Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
 Springfield—Shawver Co., Springfield, Ohio.  
 Vichek Tool Co., The, Cleveland, O.  
 ◆ Williams, J. H., & Co., Brooklyn, N. Y.

#### TOOLS AND WAYS, BALANCING.

Anderson—Anderson Bros. Mfg. Co., Rockford, Ill.  
 Bowsher's Balancing Ways—The N. P. Bowsher Co., South Bend, Ind.  
 20th Century Rockford—Rockford Tool Co., Rockford, Ill.

#### TOOLS, BALL FINISHING.

(For Repairing Superheated Joints.)

Draper Mfg. Co., Port Huron, Mich.

#### TOOLS, BEADING.

Anderson Tool & Supply Co., W. H., Detroit, Mich.  
 ◆ Buffum Tool Co., Louisiana, Mo.  
 Diener, Geo. W., Mfg. Co., Chicago, Ill.  
 Jones, Wm., Implement Wks., Minneapolis, Minn.  
 Leetonia Tool Co., Leetonia, Ohio.  
 ◆ Lovejoy Tool Works, Chicago, Ill.  
 Morris—Morris Improved Beading Tool Co., Minneapolis, Minn.  
 Mound—Mound Tool & Scraper Co., St. Louis, Mo.  
 Wiedeke—Gustave Wiedeke & Co., Dayton, O.

#### TOOLS, BELL CENTERING.

Braunsdorf-Mueller Co., Elizabeth, N. J.  
 Pratt & Whitney Co., Hartford, Conn.

#### TOOLS, BELT LACING.

◆ Clipper—Clipper Belt Lacer Co., Grand Rapids, Mich.  
 Kerr Co., Inc., New York, N. Y.  
 L. K.—Manufacturers' Belt Hook Co., Chicago, Ill.

#### TOOLS, BELT MAKERS'.

L. K.—Manufacturers' Belt Hook Co., Chicago, Ill.  
 Ranville, F., Co., Grand Rapids, Mich.

#### TOOLS, BLACKSMITHS' AND HORSESHOERS'.

Bradleys' Sons, G. W., Westport, Conn.  
 Buffum Tool Co., Louisiana, Mo.  
 ◆ Champion Blower & Forge Co., Lancaster, Pa. (Trade names—Maud S., Favorite, Our Pride, Critica, Clean Clow.)  
 Champion Tool Co., Meadville, Pa.  
 Cincinnati Tool Co., The, Cincinnati, O.  
 Harold Tool & Forge Co., Columbiana, Ohio.  
 Heller Tool Co., Newark, N. J.

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**W. A. Anderson Tool & Supply Co., Brush and Macomb Sts., Detroit, Mich.**

- ◆ Horseshoe—The Stanley Works, Atha Dept., New Britain, Conn.
- Iron City Star Brand—Iron City Tool Works, Ltd., Pittsburgh, Pa.
- Klein-Logan Co., The, Pittsburgh, Pa.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Plomb Tool Mfg. Co., Los Angeles, Cal.
- ◆ Stanley Rule & Level Co., Atha Div., New Britain, Conn.
- Vaughan & Bushnell Mfg. Co., Chicago, Ill.
- Verona Tool Works, Pittsburgh, Pa.
- Warren Tool & Forge Co., The, Warren, O.

### TOOLS, BLASTING.

Hardsocg, Martin, Co., Pittsburgh, Pa.

### TOOLS, BOILERMAKERS.

Arrow Tools—Arrow Forging and Tool Works, Chicago, Ill.

Diener, Geo. W., Mfg. Co., Chicago, Ill.  
Faessler Mfg. Co., J., Moberly, Mo.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

- ◆ Lovejoy Tool Works, Chicago, Ill.
- Mound—Mound Tool Co., St. Louis, Mo.
- Oswego Tool Co., Oswego, N. Y.
- Plomb Tool Mfg. Co., Los Angeles, Cal.
- Pratt & Whitney Co., Hartford, Conn.
- Scully Steel & Iron Co., Chicago, Ill.
- Wiedeke, Gustave, & Co., Dayton, O.

### TOOLS, BORING, LATHE.

Alert Tool Co., Philadelphia, Pa.

- ◆ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.
- Bullard Machine Tool Co., The, Bridgeport, Conn.
- ◆ Champlion—Western Tool & Mfg. Co., Springfield, O.
- Chicago—Blomfeldt & Rapp, Chicago, Ill.
- Clark Machinery Co., Cleveland, O.
- Davis—Davis Boring Tool Co., St. Louis, Mo. (expansion).
- E-Z-Set—B. & W. Tool & Die Co., Cleveland, O.
- E-Z Set—Unity Mfg. Co., The, Cleveland, Ohio.
- Forest City Hit & Tool Co., Rockford, Ill.
- Hall—Hall Mfg. Co., Abington, Mass.
- ◆ Hill Tools—Union Tool Co., Orange, Mass.
- ◆ Kelly—The Kelly Reamer Co., Cleveland, O.
- Lutz—Lutz Co., Inc., Philadelphia, Pa.
- Millers Falls Co., New York, N. Y.
- O. K. Tool Co., Inc., Shelton, Conn.
- Pratt & Whitney Co., Hartford, Conn.
- Red-E—The Ready Tool Co., Bridgeport, Conn.
- Simpli—Allen & Curtiss Co., Mishawaka, Ind.
- Stow Flexible Shaft Co., Philadelphia, Pa.
- Toledo—The Toledo Pipe Threading Machine Co., Toledo, O.
- ◆ Whitman & Barnes Mfg. Co., Akron, O.
- ◆ Williams, J. H., & Co., Brooklyn, N. Y.

### TOOLS, BOTTLE WIRING.

Boston Bottling Wiring & Labeling Co., Boston, Mass.

### TOOLS, BRANDING, GAS.

Allen, L. B., Co., Inc., Chicago, Ill.

### TOOLS, BRICKLAYERS', CEMENT WORKERS' AND MASONS'.

- Abram Cement Tool Co., Detroit, Mich.
- Anderson Tool & Supply Co., W. H., Detroit, Mich.
- ◆ Atkins, E. C., & Co., Indianapolis, Ind.
- Bonney Vise & Tool Works, Inc., Allentown, Pa.
- Buffum Tool Co., Louisiana, Mo.
- Clipper Tool Co., Buffalo, N. Y.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Gem—Kramer Bros. Foundry Co., Dayton, O.
- H. J. H.—Harrold Tool & Forge Co., Columbiana, O.
- Johnson, Wm., Newark, N. J.
- Holtum Mfg. Co., Freeport, Ill.
- Mound—Mound Tool Co., St. Louis, Mo.
- Plomb Tool Mfg. Co., Los Angeles, Cal.
- Smith & Holtum Mfg. Co., Clinton, Wis.
- Stearns, E. C., & Co., Syracuse, N. Y.

### TOOLS, BUTCHERS'.

American Tap & Die Co., Greenfield, Mass.  
G. W. Bradley's Sons, Westport, Conn.  
Hood Bros., Philadelphia, Pa.  
White, L. & I. J., Co., Buffalo, N. Y.

### TOOLS, CAULKING.

- American Saw & Tool Works, Chicago, Ill.
- Anderson Tool & Supply Co., W. H., Detroit, Mich.
- B. B.—B. B. Specialty Co., Pittsburgh, Pa.
- Bernz Co., Otto, Newark, N. J.
- Brown's—T. W. Brown & Son, Chattanooga, Tenn.
- Buffum Tool Co., Louisiana, Mo.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Heald's—John Heald, Jamestown, N. Y.
- Irrington Mfg. Co., Irrington, N. J.
- Johnson, Wm., Newark, N. J.
- Kilborn & Bishop Co., New Haven, Conn.
- Klein-Logan Co., The, Pittsburgh, Pa.
- Leestonia Tool Co., Leestonia, Ohio.
- ◆ Lovejoy—Lovejoy Tool Works, Chicago, Ill.
- McDonald, A. Y., Mfg. Co., Dubuque, Ia.
- Mound—Mound Tool Co., St. Louis, Mo.
- Mueller Mfg. Co., H., Decatur, Ill.
- National Tool Co., Brooklyn, N. Y.
- Never Break—S. & I. Co., The, Springfield, Mass.
- Pollard—Joseph G. Pollard, Brooklyn, N. Y.
- Quality—Woodward & Wanger, Philadelphia, Pa.
- Sayre, L. A., & Son, Newark, N. J.
- Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.
- Starbuck—H. M. Starbuck & Sons, Hartford, Conn.
- Laughlin, Thomas, Co., The, Portland, Me.
- Tucker Tool & Machine Co., New York, N. Y.
- White Co., The L. & I., Buffalo, N. Y.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

### TOOLS, CARPENTERS'.

(See also "Specific Headings.")

- ◆ Atkins, E. C., & Co., Indianapolis, Ind.
- Challenge—The Harrold Tool & Forge Co., Columbiana, Ohio.
- Diamond Edge—Norvell-Shapleigh Hdw. Co., St. Louis, Mo.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Goodell-Pratt Co., Greenfield, Mass.
- H. J. H.—The Harrold Tool & Forge Co., Columbiana, Ohio.
- Hood Bros., Philadelphia, Pa.
- Keen Kutter—Simmons Hardware Co., St. Louis, Mo.
- O. V. B.—Hibbard, Spencer, Bartlett Co., Chicago, Ill.
- Mack & Co., Rochester, N. Y.
- ◆ Peck, Stow & Wilcox Co., New York, N. Y.
- Stanley Works, The, New Britain, Conn.
- Starrett, The L. S., Co., Athol, Mass.
- Swan Co., The James, Seymour, Conn.
- White, L. & I. Co., Buffalo, N. Y.

### TOOLS, CENTERING.

Pratt & Whitney Co., Hartford, Conn.

### TOOLS, COMBINATION.

- Detroit Tool Co., Detroit, Mich.
- Ideal—Tessmer Machine & Tool Co., Detroit, Mich.
- Spartan—The Drop Forging Co. of New York, N. Y.
- Stewart Handy Worker—Chicago Flexible Shaft Co., Chicago, Ill.
- Thomas Mfg. Co., Dayton, O.
- ◆ Williams, J. H., & Co., Brooklyn, N. Y. (automobile).

### TOOLS, COOPERS'.

- Bradley's Sons, G. W., Westport, Conn.
- Cincinnati Tool Co., Cincinnati, O.
- Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.
- ◆ Horseshoe—Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.
- Mack Co., Rochester, N. Y.
- White Co., The L. & I. J., Buffalo, N. Y.

### TOOLS, COTTER PIN.

Buffum Tool Co., Louisiana, Mo.

### TOOLS, CRANK PIN TURNING.

Murrie & Ott, La Crosse, Wis.

### TOOLS, CUTTING-OFF.

(See "Holders, Tool.")

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### TOOLS, DIAMOND POINTED.

Crafts, Arthur A., & Co., Boston, Mass.  
D. Dessau, New York, N. Y.  
Diamond Tool & Die Works, Hartford, Conn.  
Ehrmann & Bahlisen, New York, N. Y.  
Ferallum—Joyce-Koebel Co., Inc., New York, N. Y.  
Francis & Co., Hartford, Conn.  
Osgood's—J. L. Osgood Tool Co., Buffalo, N. Y.  
Strong's—Montgomery & Co., Inc., New York.  
Wheel Truing Tool Co., Detroit, Mich.

### TOOLS, DIE SINKERS.

Harrold Tool & Forge Co., Columbiana, Ohio.

### TOOLS, DRAFTSMEN'S.

Starrett, The L. S., Co., Athol, Mass.

### TOOLS, DRILLING, OFFSET.

Harris Engineering Co., Bridgeport, Conn.  
Masseth Packer & Machine Co., Butler, Pa.

### TOOLS, ELECTRICIANS'.

Hargrave—Cincinnati Tool Co., Cincinnati, O.  
Independent Pneumatic Tool Co., Chicago, Ill.  
Red Devil—Irrington Mfg. Co., The, Irvington, N. J.

### TOOLS, ENGINEERS' FIRING.

National Tool Co., Brooklyn, N. Y.  
Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

### TOOLS, FENCE.

Irrington Mfg. Co., Irvington, N. J.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
Victor—C. E. Bonner Mfg. Co., Champaign, Ill.

### TOOLS, FILLET (FOR APPLYING).

Knight, H. W., & Son, Seneca Falls, N. Y.

### TOOLS, FIRING.

Anderson Tool & Supply Co., W. H., Detroit, Mich.  
Cook & Chick Co., Chicago, Ill. (boiler room).  
Hi-Heat—General Grinding Wheel Corp., Philadelphia, Pa.  
Hi-Heat—Spaulding & Metcalf, Philadelphia, Pa.  
Hi-Heat—Paul B. Huyette Co., Philadelphia, Pa.  
Mound—Mound Tool Co., St. Louis, Mo.  
Pilley's—Pilley Packing & Flue Brush Mfg. Co., St. Louis, Mo.  
Pollard—Joseph G. Pollard, Brooklyn, N. Y.  
Treadwell, M. H., Co., New York, N. Y.

### TOOLS, GARDEN, HAND.

Johnson, Wm., Newark, N. J.

### TOOLS, GRANITE WORKERS'.

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

### TOOLS, HAIR WORKERS.

Newark Brass Works, Newark, N. J.

### TOOLS, HOSE CLAMPING AND PACKAGE WIRING.

Beats 'Em All—Wiedner Mfg. Co., Warren, O.  
Chicago Pneumatic Tool Co., New York.  
Cleveland—The Cleveland Pneumatic Tool Co., Cleveland, O.  
McChesney, J. S., & Co., Chicago, Ill.  
Robson Mfg. Co., Galesburg, Ill.

### TOOLS, HYDRAULIC.

Hydraulic Press Mfg. Co., The, Mt. Gilead, O.

### TOOLS, ICE.

American Saw & Tool Works, Chicago, Ill.  
Columbus Handle & Tool Co., The, Columbus, Ind.  
Gifford-Wood Co., Hudson, N. Y.  
Creasey-Gruman Ice Tool Works, Branchville, Conn.  
Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
Oshkosh Mfg. Company, Oshkosh, Wis.  
Snell Mfg. Co., Fliskdale, Mass.  
White Co., The L. & I., Buffalo, N. Y.

### TOOLS, KEY SEATING.

Union Tool Co., Orange, Mass.

### TOOLS, JEWELERS'.

American—E. P. Reichhelm & Co., Inc., New York, N. Y. (brushes, sandblasts, furnaces, blowers).  
Stow Mfg. Co., Binghamton, N. Y. (drills).

### TOOLS, KURLING.

Alert Tool Co., Philadelphia, Pa.  
♦ Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.  
♦ Billings & Spencer Co., The, Hartford, Conn.  
Braunsdorf-Mueller Co., Elizabeth, N. J.  
Goodell-Pratt Co., Greenfield, Mass.  
Pratt & Whitney Co., Hartford, Conn.  
Welch, T. F., & Co., Boston, Mass.  
♦ Williams, J. H., & Co., Brooklyn, N. Y.

### TOOLS, LATHE AND PLANNER, FORGED.

(See also "Holders, Tool.")

♦ Armstrong Brothers Tool Co., Chicago, Ill.  
Bayshaw & Field, Philadelphia, Pa.  
Haynes Stellite Co., New York, N. Y.  
Krasberg Mfg. Co., Chicago, Ill.  
Lovejoy—Lovejoy Tool Co., Inc., Springfield, Vt.  
Marcy Tool Works, Inc., Putnam, Conn.  
Novo—Boker, H., & Co., Inc., New York, N. Y.  
Pratt & Whitney Co., Hartford, Conn.  
Rivett Lathe & Grinder Co., Brighton, District of Boston, Mass.  
Union Tool Co., Orange, Mass.  
♦ Vulcan—J. H. Williams Co., Brooklyn, N. Y.  
ZuBar—ZuBar Mfg. Co., Inc., Philadelphia, Pa.

### TOOLS, LEAD FLANGE.

♦ Hays Mfg. Co., Erie, Pa.  
Mueller Mfg. Co., H., Decatur, Ill.

### TOOLS, LIMEWORKS.

Columbus Handle & Tool Co., Columbus, Ind.  
Klein, Mathias, & Sons, Chicago, Ill.  
Oshkosh Mfg. Co., The, Oshkosh, Wis.  
Red Devil—Smith & Hemenway Co., New York, N. Y.  
Western Electric Co., Inc., Chicago, Ill.

### TOOLS, LOGGING.

American, Blue Line, Champion, Clyde, Columbus, Evart—America Logging Tool Co., Evart, Mich.  
Bull Dog—Warren Axe & Tool Co., Warren, Pa.  
Challenge—Harrold Tool & Forge Co., Columbiana, O.  
Columbus Handle & Tool Co., The, Columbus, Ind.  
Dixie Logging Tool Co., Chattanooga, Tenn.  
H. J. H.—The Harrold Tool & Forge Co., Columbiana, Ohio.  
Horseshoe—Stanley Rule & Level Plant, Atha Dept. New Britain, Conn.  
Isaacson, L. G., Co., Inc., Aberdeen, Wash.  
Kelley Ax & Mfg. Co., Charleston, W. Va.  
Oshkosh Mfg. Co., Oshkosh, Wis.  
Rogers Shear Co., The, Warren, Pa.

### TOOLS, MACHINE.

(See "Lathes," "Planers," etc.)

### TOOLS, MACHINE, UNIVERSAL.

Multiplex Tool Co., Inc., Brooklyn, N. Y.

### TOOLS, MACHINISTS' FINE.

♦ Brown & Sharpe Mfg. Co., Providence, R. I.  
Newman Mfg. Co., Cincinnati, O.  
Plomb Tool Mfg. Co., Los Angeles, Cal.  
Pratt & Whitney Co., Hartford, Conn.  
Stocomb—J. T. Stocomb Co., Providence, R. I.  
Starrett, The L. S., Co., Athol, Mass.

### TOOLS, MARBLE CUTTERS'.

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.  
National Tool Co., Brooklyn, N. Y.

### TOOLS, MASONS'.

H. J. H.—The Harrold Tool & Forge Co., Columbiana, Ohio.

### TOOLS, MILLING.

American Tool & Machine Co., Boston, Mass.  
♦ Geometric Tool Co., The, New Haven, Conn.



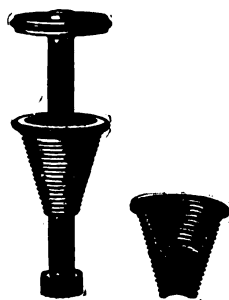
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*A Large Variety, Only One Quality—the Best*

**We Make for the Plumber, Steam and Gas Fitter**

**CAULKING** and yarning chisels, turnpins, dressers, scrapers, tap borers, ladles, bending pins, washer cutters, snips, tool bags, bending springs, wiping cloths, grease boxes, basin wrenches, drift plugs, solder pots and molds; asbestos joint runners, bibb seat reamers, tack molds, pipe cutters, testing plugs, prepared soil, etc.



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Double Cone Bibb Seat Reamer. Best tool on the market, for inside or outside threaded fittings. 4 cutters with each.

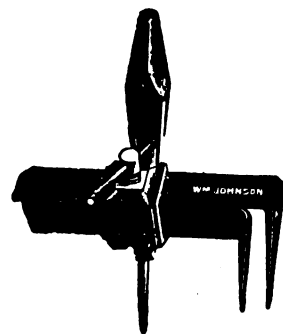
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No. 352

Washer Cutter. Blades forged from best tool steel.

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Lincoln Twist Drill Co., Taunton, Mass.  
Modern Tool Co., Erie, Pa.  
Mummert-Dixon Co., Hanover, Pa.  
O. K. Tool Co., Inc., Shelton, Conn.  
Rogers Works, Inc., The John M., Gloucester City, N. J.

◆ Union Twist Drill Co., Athol, Mass.  
Vixen—Vixen Tool Co., Philadelphia, Pa.  
◆ Wells Bros Co., Greenfield, Mass.

## TOOLS, MINING.

American Mining Tool Co., Ottumwa, Ia.  
Gill Mfg. Co., The, Philadelphia, Pa.  
Hardsocg, Martin Co., Pittsburgh, Pa.  
Iron City Star Brand—Iron City Tool Works, Ltd., Pittsburgh, Pa.  
Salem Tool Co., The, Salem, O.  
Union—The Martin Hardsocg Co., Pittsburgh, Pa.  
Verona Tool Works, Pittsburgh, Pa.  
Warwood—Warwood Tool Co., Wheeling, W. Va.

## TOOLS, MOLDERS.

Burr's Damascus Tool Works, Detroit, Mich.  
Dobson—William Dobson, Canastota, N. Y.

## TOOLS, OIL WELL.

Armstrong—Armstrong Mfg. Co., Waterloo, Iowa.  
Cameron Tool Co., Cameron, W. Va.  
Keystone Driller Co., Beaver Falls, Pa.  
Oil Well Supply Co., Pittsburgh, Pa.  
Samsco—San Antonio Machine Supply Co., San Antonio, Texas.  
Spang—Spang & Company, Butler, Pa. (Fishing.)  
Union Tool Co., Torrance, Cal.  
Wilson & Willard Mfg. Co., Los Angeles, Cal.

## TOOLS, PACKING.

◆ Chesterton's—A. W. Chesterton Co., Boston, Mass.  
Kotten Machine Co., Jersey City, N. J. (Condenser.)  
Mound Tool Co., St. Louis, Mo.  
Piley Packing & Flue Brush Mfg. Co., St. Louis, Mo.

## TOOLS, PAINTERS.

Hood Bros., Philadelphia, Pa.  
Wilcox, Crittenden & Co., Inc., Middletown, Conn.

## TOOLS, PAPER HANGERS.

Anderson Tool & Supply Co., W. H., Detroit, Mich.  
Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
Pittsburgh Block & Mfg. Co., Pittsburgh, Pa.  
Tucks—Tuck Mfg. Co., Brockton, Mass.

## TOOLS, PAVING.

Cambridge Iron Works, Cambridge, Mass.  
Lyman—Benj. K. Lyman & Co., Chicago, Ill.  
Verona Tool Works, Pittsburgh, Pa.  
Vulcan Tool & Mfg. Co., The, Quincy, Mass.

## TOOLS, PLASTER.

(See "Holders, Tool.")

## TOOLS, PLUMBERS', STEAM AND GAS FITTERS.

(Look for name of article desired, such as "Stocks," "Dies," "Wrenches.")

◆ Armstrong Mfg. Co., The, Bridgeport, Conn.  
◆ B. B. Specialty Co., Pittsburg, Pa.  
◆ Beaver, Easy-Worker—The Borden Co., Warren, O.  
◆ Buffum Tool Co., Louisiana, Mo.  
Challenge—The Harrold Tool & Forge Co., Columbiana, Ohio.  
◆ Deacer, Geo. W., Mfg. Co., Chicago, Ill.  
◆ Greenfield Tap & Die Corp., Greenfield, Mass.  
H. J. H.—The Harrold Tool & Forge Co., Columbiana, Ohio.  
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Vanderman Mfg. Co., The, Willimantic, Conn.  
◆ Vulcan—J. H. Williams & Co., Brooklyn, N. Y.  
◆ Walworth Mfg. Co., Boston, Mass.  
Warnock Mfg. Co., Worcester, Mass.  
Wolff Mfg. Co., Chicago, Ill.  
Woodward-Wanger Co., Philadelphia, Pa.

## TOOLS, PNEUMATIC.

Amco—Amco Sales Corp., Chicago, Ill.  
American Die & Tool Co., Reading, Pa.  
Barr Rapid Production—Pennsylvania Pneumatic Co., Erie, Pa.  
Blaisdell—Blaisdell Machinery Co., Bradford, Pa.  
Canton—Canton Pneumatic Tool Co., Canton, O.  
◆ Chicago Pneumatic Tool Co., New York, N. Y.  
Cleveland Pneumatic Tool Co., The, Cleveland, O.  
Crown—Ingersoll-Rand Co., New York.  
Crown, Little David, Imperial—Ingersoll-Rand Co., New York, N. Y.  
Dallett—Dallett Co., Thos. H., Philadelphia, Pa.  
◆ Danlap Mfg. Co., Columbus, O.  
Fairhurst—American Air Compressor Works, Brooklyn, N. Y.  
Hanna—Vulcan Engineering Sales Co., Chicago, Ill.  
Henderson Iron Works, The, Jersey City, N. J.  
Keller—Master—Keller Pneumatic Tool Co., Grand Haven, Mich.  
Oldham, Geo., & Son Co., Frankford, Philadelphia, Pa.  
Pittsburgh—The Pittsburgh Pneumatic Co., Canton, Ohio.  
Schramm—Chris. D. Schramm and Son, Inc., Philadelphia, Pa.

**Sellers, Wm., & Co., Inc., Philadelphia, Pa.**  
**Thor—Independent Pneumatic Tool Co., Chicago, Ill.**  
**Titan Automatic Tool Co., New York.**  
**U. & W.—The Dunlap Mfg. Co., Columbus, O.**  
**Worthington Pump & Machinery Corp., New York, N. Y.**

#### TOOLS, POTTERS.

**H. J. H.—The Harrold Tool & Forge Co., Columbiana, Ohio.**

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 ♦ **Buffum Tool Co., Louisiana, Mo.**

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**Handlan-Buck Mfg. Co., St. Louis, Mo.**  
**Hubbard & Co., Pittsburgh, Pa.**  
**Iron City Star—Iron City Tool Works, Pittsburgh, Pa.**  
**Klein-Logan Co., The, Pittsburgh, Pa.**  
 ♦ **Manning, Maxwell & Moore, Inc., New York, N. Y.**  
**Milwaukee Tool & Forge Co., Milwaukee, Wis.**  
**O'Leary & Son Co., Arthur, Chicago, Ill.**  
**Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.**  
**Verona Tool Works, Pittsburgh, Pa.**  
**Wiedeke & Co., Gustave, Dayton, O.**  
**Western Tool & Forge Co., Brackenridge, Pa.**

#### TOOLS, ROCK DRILL SHARPENING.

♦ **Horseshoe—Stanley Rule & Level Co., Atha Div., New Britain, Conn.**  
**Ingersoll-Rand Co., New York, N. Y.**

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**Tinker, F., & Sons Co., Pittsburgh, Pa.**

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**Lyman—Benj. K. Lyman & Co., Chicago, Ill.**  
**National Tool Co., Brooklyn, N. Y.**  
**Niagara Machine & Tool Works, Buffalo, N. Y.**  
**Stortz & Son, John, Philadelphia, Pa.**

#### TOOLS, ROTARY, HACK SAW, PLUMBERS'.

**Excelso Specialty Co., Buffalo, N. Y.**

#### TOOLS, SAW.

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 ♦ **Hoe & Company, R., New York, N. Y.**  
 ♦ **Atkins—E. C. Atkins & Co., Indianapolis, Ind.**  
 ♦ **Atkins Pattern—Clipper Tool Co., Buffalo, N. Y.**  
 ♦ **Disston & Sons, Inc., Henry, Philadelphia, Pa.**  
**Frank Edge & Co., Grand Rapids, Mich.**  
 ♦ **Hoe—R. Hoe & Co., New York.**  
 ♦ **Machinery Co. of America, Grand Rapids, Mich.**  
 ♦ **Simonds Mfg. Co., Fitchburg, Mass.**  
**Southern Saw Works, Atlanta, Ga.**  
**Stearns, E. C., & Co., Syracuse, N. Y.**

#### TOOLS, SCREW CUTTING.

(See "Dies," "Taps," "Plates, Screw," "Stocks.")

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**Dikeman Mfg. Co., South Norwalk, Conn.**  
**Goodell-Pratt Co., Greenfield, Mass.**  
**Millers Falls Co., New York, N. Y.**  
**Orient—Crescent Co., Inc., The, Meriden, Conn.**  
**Red Devil—Smith & Hemenway Co., New York, N. Y.**

#### TOOLS, SHAPER.

(See "Holders, Tool.")

#### TOOLS, SHIP CARPENTERS'.

**G. W. Bradley's Sons, Westport, Conn.**  
**Mack Company, Rochester, N. Y.**

#### TOOLS, SLAG DIGGING.

**Cincinnati—Rivet Cutting Gun Co., Cincinnati, O.**

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(See "Coppers & Irons, Soldering.")

**Allen—L. B. Allen Co., Inc., Chicago, Ill.**  
**Clark—Chicago Well Supply Co., Chicago, Ill.**

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**Allen—L. B. Allen Co., Inc., Chicago, Ill.**  
**Dobbins Mfg. Co., Stillwater, Minn.**

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**Chapin-Skelton Corp., Syracuse, N. Y.**

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**Helwig Mfg. Co., St. Paul, Minn.**  
**Heartley Machine Variety Iron & Tool Works, Toledo, O.**  
**Horseshoe—The Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.**  
**Ingersoll-Rand Co., New York, N. Y.**  
**Vulcan Tool Mfg. Co., The, Quincy, Mass.**

#### TOOLS, STRUCTURAL IRON WORKERS'.

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 ♦ **Vulcan Tool Mfg. Co., The, Quincy, Mass.**

#### TOOLS, TAPPING MACHINE.

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**Pratt & Whitney Co., Hartford, Conn.**  
 ♦ **Walworth Mfg. Co., Boston, Mass.**

#### TOOLS, THREADING.

(See "Dies," "Plates, Screw," "Stocks," and "Taps.")

#### TOOLS, TINNERS'.

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**Diener, Geo. W., Mfg. Co., Chicago, Ill.**  
**Dreis & Krump Mfg. Co., Chicago, Ill.**  
**Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.**  
**Niagara Machine & Tool Works, Buffalo, N. Y.**  
 ♦ **Peck, Stow & Wilcox Co., New York, N. Y.**  
**Plomb Tool Mfg. Co., Los Angeles, Cal.**

#### TOOLS, TURPENTINE.

**Brady's Sons, G. W., Westport, Conn.**  
**White, L. & I. J., Co., Buffalo, N. Y.**

#### TOOLS, TURRET HEAD.

(See "Holders, Tool.")

#### TOOLS, VACUUM CLEANER.

**Century Foundry Co., Syracuse, N. Y.**

#### TOOLS, VALVE FACING.

(See also "Machines, Valve Reseating.")

**American Tool & Machine Co., Boston, Mass.**  
**Draper—The Draper Mfg. Co., Port Huron, Mich.**  
**F. B. C.—Furness Bros. Co., Chicago, Ill.**  
**Herbrand Co., The, Fremont, O.**  
**Murrie & Ott, La Crosse, Wis.**  
**O'Meara's Pat.—J. O'Meara, Inc., New York, N. Y.**  
**Skinner—M. B. Skinner Co., Chicago, Ill.**  
**Valve Seating Tool Co., The, Southport, Conn.**

#### TOOLS, WAGONMAKERS'.

♦ **Cincinnati Tool Co., Cincinnati, O.**  
**Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.**

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(See also "Drillers, Well.")

**American—The American Well Works, Aurora, Ill.**  
**American Well & Prospecting Co., Corsicana, Tex.**  
**Beaumont—Beaumont Iron Works Co., Beaumont, Tex.**  
**Boardman Co., Inc., The Robert, Oil City, Pa.**  
**Hughes Rotary—Hughes Tool Company, Houston, Tex.**  
**Keystone Driller Co., Beaver Falls, Pa.**  
**Leidecker Tool Co., Marietta, O.**  
**Oil Well Supply Co., Pittsburgh, Pa.**  
**Sparks Drilling Jar Co., Charleston, W. Va.**  
 ♦ **Walworth Mfg. Co., Boston, Mass.**

#### TOOLS, WOOD CARVING.

**Buck Bros., Millbury, Mass.**

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**Dallett—Thos. H. Dallett Co., Philadelphia, Pa.**

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**Bennett—Bay State Stamping Co., Worcester, Mass.**  
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**Wood Drill Works, Chicago, Ill.**

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**American Foundry & Mfg. Co., St. Louis, Mo.**  
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## Specialties for Plumbers, Gas Fitters and Steam Fitters

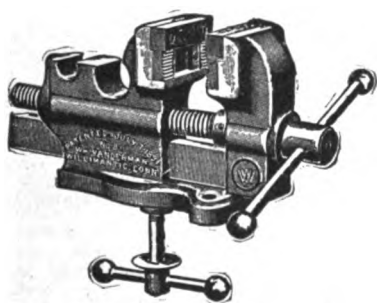
We are the specialists to the tradesmen just mentioned, and our patented devices are so thoroughly tested and approved by years of experience that their favor is quite universal. The four specialties illustrated will serve as examples.



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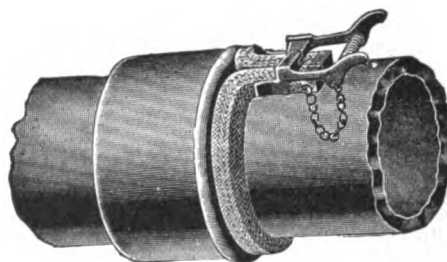
are the best and strongest on the market. They are lighter and cheaper than other makes and will outwear several wood chests. Made in eleven styles; of American sheet steel and Connecticut oak. First class brass lock and bolts to screw down cover at front corners. Special sizes made to order.

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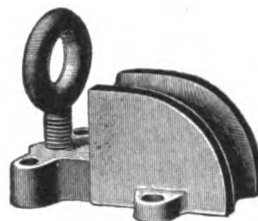
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Three combinations in one. Constructed with steel sliding bar. Most practical and useful vise for the plumber or fitter. Each combination is independent of the others. Parts are interchangeable.



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is a sure Joint Runner, indispensable to plumbers, water and gas companies. Red hot lead does not affect it. The best on the market.



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This fixture is a necessity on every fitter's bench. It is the busy man's time saver. There is nothing to get out of order. It can be attached readily to a bench or other substitute. The eye bolt is capable of adjustment which enables a close and accurate bend. Cannot be surpassed for straightening and bending pipe by any similar device.

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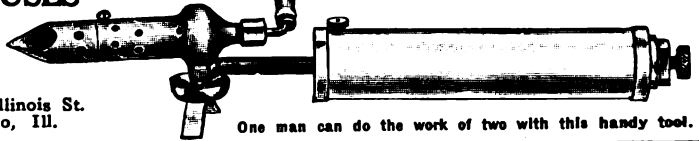
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Pennsylvania Structural Slate Co., Easton, Pa.  
Woodley—Woodley Slate Co., Bangor, Pa.

### TOPS AND BASES, RADIATOR.

Pennsylvania Structural Slate Co., Easton, Pa.

### TOPS, SINK, MARBLE.

(See "Marble, Plumbing.")

### TOPS, SINK, SLATE.

(See "Slate, Plumbing.")

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Clayton & Lambert Mfg. Co., Detroit, Mich.  
Spartan—The Carleton Co., Boston, Mass.  
Super Brand—The Lenk Mfg. Co., Boston, Mass.  
Torrid—Geo. W. Diener Mfg. Co., Chicago, Ill.

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- ◆ Allright—Clayton & Lambert Mfg. Co., Detroit, Mich.
- Always Ready—Schaefer & Beyer, Newark, N. J.
- Always Reliable—Otto Bernz Co., Newark, N. J.
- American Gas Furnace Co., Elizabeth, N. J.
- American Solder & Flux Co., Philadelphia, Pa.
- Anthony Co., The, Long Island City, N. Y.
- Baby—McGill Mfg. Co., Valparaiso, Ind.
- Bantam Electric Gas—Tyler Mfg. Co., Boston, Mass.
- Barthel—Globe Gas Light Co., Boston, Mass.
- Beach-Russ Co., New York, N. Y.
- Block's—Atlas Brass Works, San Francisco, Cal.
- Bussor—Charles A. Hones, Inc., Baldwin, Long Island, N. Y.
- Climax—Garrison Brass & Mach. Co., New York.
- Detroit—Detroit Torch & Mfg. Co., Detroit, Mich.
- Dreadnaught—P. Wall Mfg. Supply Co., Pittsburgh.
- Fee Nix—Decker Mfg. Co., Newark, N. J. (pumpless).
- Flora B., Flora L.—A. E. Lovett Co., East Orange, N. J.
- Hot-test, Beekman—Garrison Brass & Machine Works, New York.
- Imp—Chausse Mfg. Co., Detroit, Mich.
- Imp—Frank E. Fitts Mfg. & Supply Co., Boston, Mass.
- Imp—The Carleton, Boston, Mass.
- Improved Appliance Co., Brooklyn, N. Y.
- Karas Solder—Karass Electric Co., Chicago, Ill.
- Kerosene Flameblast—North American Mfg. Co., The, Cleveland, O.
- McLeod Co., The, Cincinnati, O.
- ◆ Milburn, Alexander Co., The, Baltimore, Md.
- Neverout—Globe Gas Light Co., Boston, Mass.
- Nev-O-Fail, Hot Blast, Old Reliable, Phoenix—Turner Brass Works, Sycamore, Ill.
- New Allen—L. B. Allen Co., Inc., Chicago, Ill.
- ◆ Cur Special, Pet—Clayton & Lambert Mfg. Co., Detroit, Mich.
- Prest-O-Lite—The Prest-O-Lite Co., Inc., Indianapolis, Ind.
- Red-Hot—Ashton Mfg. Co., Newark, N. J.
- Selas—The Selas Co., Philadelphia, Pa.
- Sun Vapor & Gas Street Light Co., Canton, O.
- Super Brand—The Lenk Mfg. Co., Boston, Mass.
- Torrid—Geo. W. Diener Mfg. Co., Chicago, Ill.
- Vesuvius—Quick Meal Stove Co., Division, American Stove Co., St. Louis, Mo.
- Victor's Blow Torch Co., Butte, Mont.
- Volcano—Volcano Torch & Mfg. Co., Erie, Pa.
- Walter's—The Quadrige Mfg. Co., Chicago, Ill.

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Bastian-Blessing Co., Chicago, Ill.  
Bishop & Babcock Co., The, Cleveland, O.  
Brooks Machine Co., Wichita, Kans.  
Buckeye—The Macleod Co., Cincinnati, O.  
Davis—Davis-Bournonville Co., Jersey City, N. J.  
Ellipsograph—The Shawver Co., Springfield, O.  
Federal Brass Works, Chicago, Ill.  
Ferrofix—The American Ferrofix Brazing Co., Philadelphia, Pa.  
Improved Appliance Co., Brooklyn, N. Y.  
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### THE ALEXANDER MILBURN COMPANY—BALTIMORE, MD

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Oxweld Acetylene Co., Chicago, Ill.  
Staylit—Torchweld Equipment Co., Chicago, Ill.  
Torrid—Geo. W. Diener Mfg. Co., Chicago, Ill.  
Vulcan—Chausse Mfg. Co., Detroit, Mich.  
Weldcraft Equipment Co., Pittsburgh, Pa.

### TORCHES, DECARBONIZING.

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Federal Brass Works, Chicago, Ill.  
◆ Milburn, Alexander Co., The, Baltimore, Md.  
Rego—The Bastian Blessing Co., Chicago, Ill.  
Torchweld—Torchweld Equipment Co., Chicago, Ill.

### TORCHES, ELECTRIC.

Torrid—Geo. W. Diener Mfg. Co., Chicago, Ill.

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Eagle—Eagle Mfg. Co., Wellsburg, W. Va.  
Garrett—W. D. Garrett & Co., New York, N. Y.  
◆ Gem—Gem Mfg. Co., Pittsburgh, Pa.  
Houchin, Thos. W., Co., Inc., New York, N. Y.  
Johnson, Wm., Newark, N. J.  
Malleable Iron Fittings Co., Branford, Conn.  
◆ Milburn, Alexander Co., The, Baltimore, Md.  
◆ Noera Mfg. Co., Waterbury, Conn.  
Obermayer, S., Co., The, Cincinnati, Ohio.  
Tower & Lyon Co., New York, N. Y.  
Scott—C. U. Scott & Son, Rock Island, Ill.  
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Brazed Steel

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 Knapp Mfg. & Supply Co., New York, N. Y.  
 Johnson—Johnson Gas Appliance Co., Cedar Rapids, Iowa.

◆ Milburn, Alexander Co., The, Baltimore, Md.

#### TORCHES, HEATING, PORTABLE.

Kittle-Kettle—Aeroll Burner Co., Inc., Union Hill, N. J.

◆ Milburn, Alexander Co., The, Baltimore, Md.

#### TORCHES, ICE MELTING, RAILWAY, SWITCH.

Hauck Mfg. Co., Brooklyn, N. Y.  
 Vulcan B—Chausse Mfg. Co., Detroit, Mich.

#### TORCHES, LABORATORY.

Bernz, Otto, Newark, N. J.  
 Busser—Charles A. Hones, Inc., Baldwin, Long Island, N. Y.

◆ Clayton & Lambert Mfg. Co., Detroit, Mich.  
 Improved Appliance Co., Brooklyn, N. Y.

#### TORCHES, OUTDOOR LIGHTING.

Abbe Engineering Co., New York, N. Y.  
 Anthony Co., The, Long Island City, N. Y.  
 Ashton Mfg. Co., Newark, N. J.  
 Best—Best Light Co., Canton, O.  
 Buckeye—The Macleod Co., Cincinnati, O.  
 Dangler—Dangler Stove Co., Div., American Stove Co., Cleveland, O.  
 Quick Meal Stove Co., Division, American Stove Co., St. Louis, Mo.  
 Red-Hot—Ashton Mfg. Co., Newark, N. J.  
 Reliable—Reliable Stove Co., Div. of American Stove Co., Cleveland, O.

#### TORCHES, SOLDERING.

(See also Torches, Blow and Furnaces Soldering.)  
 Karas Soldering—Karas Electric Co., Chicago, Ill.  
 Rego—The Bastian-Blessing Co., Chicago, Ill.  
 Solderall—Solderall Co., Newark, N. J. (Self-acting.)  
 Sod-Tor-Lite—B. E. Hicken Sod-Tor-Lite Co., Prairie Hill, Mo.

#### TOW, FLAX.

Union Fibre Co., Inc., Winona, Minn.

#### TOWERS, COAL, ELECTRIC.

Link-Belt Company, Chicago and Philadelphia.  
 Maine Electric Co., Portland, Me.

#### TOWERS, COOLING.

Alberger—Alberger Pump & Condenser Companies, New York, N. Y.  
 Columbiana Boiler Co., Columbiana, Ohio.  
 Hart—B. Franklin Hart, Jr., Co., New York.  
 Koven, L. O. & Bro., Jersey City, N. J.  
 Ruemmel-Dawley Mfg. Co., St. Louis, Mo.  
 Stocker, George J., St. Louis, Mo.  
 C. H. Wheeler—C. H. Wheeler Mfg. Co., Philadelphia, Pa.  
 Wheeler-Bernard—The Wheeler Condenser & Engineering Co., New York, N. Y.  
 Worthington, Henry, R., New York, N. Y.

#### TOWERS, MOIST.

Archer Iron Works, Chicago, Ill.  
 Link-Belt Company, Chicago and Philadelphia.

#### TOWERS, RADIO.

Milliken Brothers Mfg. Co., Inc., New York, N. Y.  
 Pittsburg-Des Moines Steel Co., Des Moines, Iowa.

#### TOWERS, TRANSMISSION.

Blaw-Knox Co., Pittsburgh, Pa.  
 Chicago Bridge & Iron Works, Chicago, Ill.  
 Des Moines Bridge & Iron Co., Des Moines, Ia.  
 Milliken—Milliken Brothers Mfg. Co., Inc., New York.  
 Ritter-Conley Mfg. Co., Leedsdale, Pa.

#### TOWERS, WATER, CONCRETE.

◆ Lakewood—The Lakewood Engineering Co., Cleveland, Ohio.  
 Polk-Genung-Polk Co., Fort Branch, Ind.  
 Weber—Weber Chimney Co., Chicago, Ill.

#### TRAILERS, FIRE.

Chief Croker—Croker Natl. Fire Prevention Eng. Co., New York, N. Y.

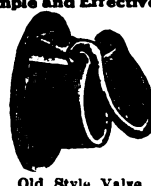
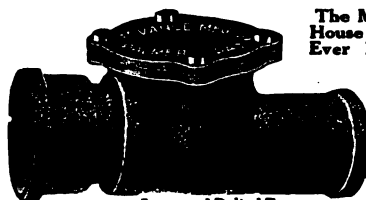
#### TRAILERS FOR GASOLINE OR ELECTRIC TRACTORS.

Alvey Mfg. Co., St. Louis, Mo.  
 Arcadia Trailer Corporation, Newark, N. Y.  
 Biehl Iron Works, Inc., The, Reading, Pa.

## The Erie-Palmer Trap

Improved Gas and Back Water

The Most Simple and Effective House Valve Ever Made.



Improved Bolted Trap  
 Also made with Clutch Cover

Old Style Valve

A positive protection against Sewer Gas and Back Water. It is not affected by frost. It is the original and only House Valve having a Perfect Hand Ground Seat. Write for our new catalog.

J. A. ZURN MANUFACTURING CO., ERIE, PA.  
 Cast Iron Plumbing and Hardware Specialists

Equipment Mfg. Co., Cleveland, O.  
 Fairmont Gas Engine & Railway Motor Car Co., Fairmont, Minn.  
 Kilbourne & Jacob Mfg. Co., Columbus, O.  
 Jackson Trailers—Miles Mfg. Co., Jackson, Mich.  
 Yale—Yale & Towne Mfg. Co., Stamford, Conn.  
 Zering H., Mfg. Co., Cincinnati, O.

#### TRAMMELS.

Brown & Sharpe Mfg. Co., Providence, R. I.  
 Goodell-Pratt Co., Greenfield, Mass.  
 Starrett, The L. S. Co., Athol, Mass.  
 Union Tool Co., Orange, Mass.

#### TRAMWAYS, OVERHEAD AND AERIAL.

(See "Cableways" and "Trolleys.")

American Steel & Wire Co., Chicago, Ill.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Patterson-Kelley Co., The, New York, N. Y.

#### TRANSMISSIONS, RIGHT ANGLE.

(See also "Machinery, Power Transmission.")

Almond—Almond Company, Ashburnham, Mass.  
 Brown Co., The A. & F., New York, N. Y.  
 ◆ Dodge American System—Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Howe Chain Co., Muskegon, Mich.  
 ◆ Hill Clutch Co., The, Cleveland, O.  
 Lentz Art Die & Machine Co., Indianapolis, Ind.  
 Link-Belt Company, Chicago and Philadelphia.  
 Woods, T. B., Sons Co., Chambersburg, Pa.

#### TRANSMISSION, SPEED REDUCING.

James—D. O. James Mfg. Co., Chicago, Ill.  
 ◆ Jones, W. A., Foundry & Machine Co., Chicago, Ill.

#### TRANSMISSIONS, VARIABLE SPEED.

"Evans"—Evans Friction Cone Co., Newton Centre, Mass.  
 Hunter—Hunter Machine Co., James, North Adams, Mass.  
 Lewellen—Lewellen Mfg. Co., Columbus, Ind.  
 ◆ Moore & White Co., The, Philadelphia, Pa.  
 Scriven Speed Regulator—Goodman Machine & Tool Co., New York, N. Y.  
 ◆ The Reeves—Reeves Pulley Co., Columbus, Ind.

#### TRAPS, AIR.

◆ Swartwout—The Ohio Body & Blower Co., Cleveland, O.  
 Wright-Austin—Wright-Austin Co., Detroit, Mich.

#### TRAPS, ANTI-SYPHON.

Cudell, F. E., Cleveland, Ohio.  
 Elgin—Elgin Brass Co., Cleveland, Ohio.  
 Fleck Bros. Co., Philadelphia, Pa.  
 McAuliffe—Boston Brass Co., Waltham, Mass.  
 Newton—Providence Steam Trap Co., Providence, R. I.  
 Rudolph, Co., A. J., Philadelphia, Pa.  
 Sanitary Company of America, Linsfield, Pa.

#### TRAPS, BACK WATER.

Acme—Boston Brass Co., Waltham, Mass.  
 Acme—Sanitas Mfg. Co., Boston, Mass.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Bakers—Iowa Mfg. Co., Oskaloosa, Ia.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Bendor—Haines, Jones & Cadbury Co., Philadelphia.  
 Blake—Blake Specialty Co., Rock Island, Ill.  
 Bower—The Monarch Brass Co., Cleveland, O.  
 Butler—Thos. F. Butler, Lorain, O.



# OPENWAY BACKWATER VALVES

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THE VALVE  
SPECIFIED BY THE  
U. S. GOVERNMENT

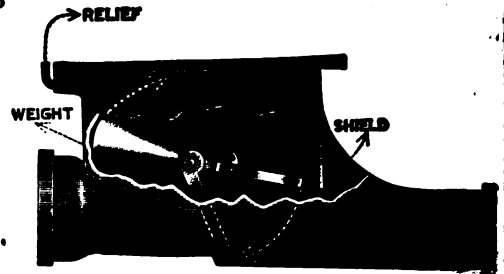
Write for catalogue showing all styles and sizes.  
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CHICAGO



Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.

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Concord Foundry Co., Concord, N. H.

Conrad's—John F. Conrad, Elizabeth, N. J.

Cooper Foundry Co., The, Atchison, Tex.

Cudell—F. E. Cudell, Cleveland, O.

Dale—Standard Brass & Iron Works, Milwaukee, Wis.

Dehn's Acme—Compound Injector & Specialty Co., Chicago, Ill.

Duffy—The Cassidy Fairbanks Mfg. Co., Chicago, Ill.

Eric-Palmer—J. A. Zurn Mfg. Co., Erie, Pa.

Franklin Pipe & Foundry Co., Chicago, Ill.

Glenn Mfg. Co., St. Charles, Ill.

Guilderland Foundry Co., Guilderland, N. Y.

Illinois Malleable Iron Co., Chicago, Ill.

Kelly & Jones Co., The, Greensburg, Pa.

Mac—A. E. MacDonald, Worcester, Mass.

Marsh—Builders Specialty Co., Chicago, Ill.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

McNab & Harlin Mfg. Co., New York, N. Y.

Miller—Miller Foundry & Specialty Co., North Tona-

wanda, N. Y.

Mott Iron Works, The J. L., Trenton, N. J.

Murphy—Murphy Specialty Co., Milwaukee, Wis.

Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.

Palmer—J. A. Zurn Mfg. Co., Erie, Pa.

Palmer—American Foundry & Mfg. Co., St. Louis, Mo.

Palmer—A. L. Swett Iron Works, Medina, N. Y.

Peck Bros. Co., The, New Haven, Conn.

Pennis—The Kennedy Valve Mfg. Co., Elmira, N. Y.

Powell—Powell Brass Mfg. Co., Grand Rapids, Mich.

Prior Brass Mfg. Co., Kansas City, Mo.

Reading—Reading Foundry & Supply Co., Reading, Pa.

Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.

Salem—Salem Brass & Iron Mfg. Co., Salem, N. J.

Sanitary Company of America, Linfield, Pa.

Sanos—Jenkins Mfg. Co., New York, N. Y.

Shay-Bonnell—Shay-Bonnell Valve Co., Elizabeth, N. J.

South Bend Foundry Co., South Bend, Ind.

Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.

Webco—F. W. Webb Mfg. Co., Boston, Mass.

Wolff Mfg. Co., Chicago, Ill.

### TRAPS, BAG BRASS.

Acheson Mfg. Co., Braddock, Pa.

### TRAPS, BASIN OR LAVATORY.

Acheson Mfg. Co., The, Braddock, Pa.

Airo—American Foundry & Mfg. Co., St. Louis, Mo.

American Anti Syphon—American Foundry & Mfg.

Co., St. Louis, Mo.

American Brass & Conner Co., The, New York, N. Y.

American Sanitary Mfg. Co., Abingdon, Ill. (cast

and bent tube).

American Pin Co., Waterbury, Conn.

American Universal—American Foundry & Mfg. Co.,

St. Louis, Mo.

Ball—McCambridge Co., Philadelphia, Pa.

B. B.—Boston Brass Co., Waltham, Mass.

Beaton Mfg. Co., A. J., New Britain, Conn.

Blessing, C. A., Philadelphia, Pa.

Bower—Monarch Brass Co., Cleveland, O.

Buckeye Brass & Mfg. Co., Cleveland, O.

Brasco—The Columbus Brass Co., Columbus, O.

Cahill Mfg. Co., Worcester, Mass.

Clarke—Robert Clarke, Brooklyn, N. Y.

Clean Sweep—Detroit Sanitary Supply Co., Detroit

Glow—James B. Glow & Sons, Chicago, Ill.

Cochrane, J. A., Brass Mfg. Co., Cleveland, O. (tu-

bular).

Coyne & Delany Co., Brooklyn, N. Y.

Cudell—F. E. Cudell, Cleveland, O. (lead).

Dearborn Brass Co., Cedar Rapids, Ia.

Delany—The Columbus Brass Co., Columbus, O.

Dimeck & Fink Co., New York, N. Y.

Du Bois, F. N., & Co., Inc., The, New York, N. Y.

Edwardsville Brass Co., Edwardsville, Ill.

Elgin Brass Co., Cleveland, O.

Em-Ess, Em-Ess Spiro—The Meyer-Sniffen Co., New York, N. Y.

Exeter Brass Works, Exeter, N. H.

Federal Brass Mfg. Co., Cleveland, O.

Fee & Mason Mfg. Co., New York, N. Y.

Femco—Frost Mfg. Co., The, Kenosha, Wis.

Fries & Co., Buffalo, N. Y.

Glauber Brass Mfg. Co., Cleveland, O.

Greenwood Mfg. Co., Detroit, Mich.

Haines, Jones & Cadbury Co., Philadelphia, Pa.

Trade names—Bennor, Pointer.

Haydenville Co., The, Haydenville, Mass.

Hoffman Mfg. Co., B., Milwaukee, Wis.

Humphries Mfg. Co., The, Mansfield, O.

Hydric—The Hydraulic Specialty Co., Philadelphia.

I. & M.—The Ireland & Matthews Mfg. Co., Detroit

Kretschmer Mfg. Co., Dubuque, Ia.

Little, M. S., Mfg. Co., Hartford, Conn.

Loyal Brass Co., Cleveland, O.

Lukomski Brothers Co., Detroit, Mich.

Marvel—Detroit Marvel Brass Mfg. Co., Detroit, Mich.

McCambridge Co., Philadelphia, Pa.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

Mills Brass Co., W. A., Port Chester, N. Y.

Milwaukee Brass Mfg. Co., Milwaukee, Wis.

Modern Iron Works, Quincy, Ill.

Mott, J. L., Iron Works, Trenton, N. J., Trade names

Economic, Half S. Sanitas, Sanito.

Mueller Mfg. Co., H., Decatur, Ill.

Murdock Mfg. & Supply Co., The, Cincinnati, O.

Murphy—Murphy Specialty Co., Milwaukee, Wis.

National—National Mfg. & Supply Co., Minneapolis,

Minn.

Nelson Mfg. Co., N. O., St. Louis, Mo.

New Jersey Tube Co., New York, N. Y.

Paragon—Paragon Brass Mfg. Co., Cleveland, O.

Park & McKay Co., Detroit, Mich.

Peck Bros. & Co., The, New Haven, Conn.

Penn—East Penn Foundry Co., Macungie, Pa.

Perkes Co., Charles, Philadelphia, Pa.

Prior Brass Mfg. Co., Kansas City, Mo.

Primrose—Reid Brass Mfg. Co., Brooklyn, N. Y.

Protector—Federal-Huber Co., Chicago, Ill.

Rex, Saxon, Seneca, Sure Seal—J. D. Johnson Co.,

Philadelphia.

Royal—American Fdy. & Mfg. Co., St. Louis, Mo.

Rudolph—Alfred J. Rudolph Co., Philadelphia, Pa.

Rundle Mfg. Co., Milwaukee, Wis.

Salem Brass & Iron Mfg. Co., Salem, N. J.

Sanitary Co. of America, The, Linfield, Pa.

Sanitas—Sanitas Mfg. Co., Boston, Mass.

Sanos—Jenkins Mfg. Co., New York, N. Y.

Savill's, Thomas, Sons, Philadelphia, Pa.

Schill Specialty Co., Cleveland, O.

Secours—Federal-Huber Co., Chicago, Ill.

Serpentine—McCambridge Co., Philadelphia, Pa.

S. & K.—Street & Kent Mfg. Co., Chicago, Ill.

Standard Brass Mfg. Co., Utica, N. Y.

Sure Seal—American Pin Co., Waterbury, Conn.

Union Metal Works, Chelsea, Mass.

Universal—Federal-Huber Co., Chicago, Ill.

Webb, F. W., Mfg. Co., Boston, Mass., Trade names

—Brooklyn, Harvard, Howard, Princeton, Rich-

mond, Yale.

Wise, J. B., Inc., Watertown, N. Y.

Wolff Mfg. Co., Chicago, Ill.

Wonder—American Pin Co., Waterbury, Conn.

### TRAPS, BATH.

Advance—J. A. Zurn Mfg. Co., Erie, Pa.

American Brass Novelty Co., Grand Haven, Mich.

American Foundry & Mfg. Co., St. Louis, Mo.

American Sanitary Mfg. Co., Abingdon, Ill.

American Pin Co., Waterbury, Conn.

Baby—Thomas Savill & Sons, Philadelphia, Pa.

Bennor-Globe—McCambridge Co., Philadelphia.

Boosey's—Greenwood Mfg. Co., Detroit, Mich.

Bower—The Monarch Brass Co., Cleveland, O.

Buckley—Dalton-Ingersoll Mfg. Co., Boston, Mass.



## FROST

## The "Femco" Trap and Waste Line

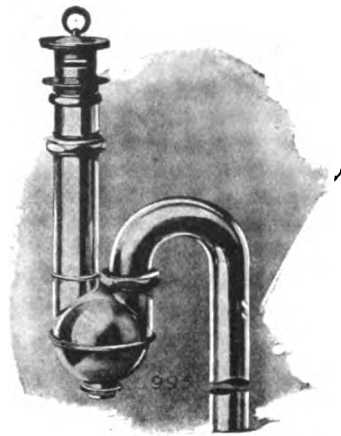
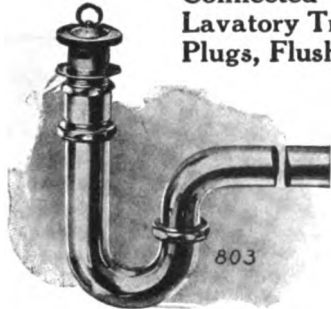
is characterized by superior finish, cast nuts, die-cut threads, and standard measurements. This attention to details applies to our entire line of

**Connected Wastes and Overflows, Vent Fittings, Lavatory Traps, Supply Pipes, Sink Strainers and Plugs, Flush Valves, Ball Cocks, Double and Single Acting Levers, Copper Floats, Seat Hinges, Etc.**

Coupled with dependable quality is efficient service—a combination hard to beat. "FEMCO" goods and *satisfied* customers are synonymous.

**The Frost Manufacturing Co.**

**Kenosha, Wis.**



Clarke—Robert Clarke, Brooklyn, N. Y.  
Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.

Columbia—The John Douglas Co., Cincinnati, O.  
Combino—McCormick Mfg. Co., Dayton, O.  
Crawford—Jos. H. Young Co., Boston, Mass.  
Cudell—F. E. Cudell, Cleveland, O. (lead).  
D. C. Mfg. Co., The, Canton, O.  
Dearborn Brass Co., Cedar Rapids, Iowa.  
Deep-Seal, Simplex, Whirlscrew, Integral, Duplex—  
Wolverine Brass Works, Grand Rapids, Mich.  
D. I.—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
Detroit Brass & Malleable Works, Inc., Detroit, Mich.

Du Bois, F. N., & Co., Inc., The, New York, N. Y.  
Edwardsville Brass Works, Edwardsville, Ill.  
Exeter Brass Works, Exeter, N. H.  
Federal Brass Mfg. Co., The, Cleveland, O.  
Glauber Brass Mfg. Co., Cleveland, O.  
Globe Foundry Co., Detroit, Mich.  
Haines, Jones & Cadbury Co., Inc., Philadelphia, Pa.

Trade names—Bennor, Pointer, Purita.  
Haydenville Co., The, Haydenville, Mass.  
Humphryes Mfg. Co., The, Mansfield, O.  
Imperial—Street & Kent Mfg. Co., Chicago, Ill.  
J. H. Y. Co.—Joseph H. Young Co., Boston, Mass.  
Johns-Manville, Inc., New York, N. Y.  
Jumbo Heater & Mfg. Co., Cleveland, O.  
Keystone Brass Works, Inc., Erie, Pa.

Kitson Co., Philadelphia, Pa.  
Kretschmer Mfg. Co., Dubuque, Ia.  
Little, M. S., Mfg. Co., The, Hartford, Conn.  
Lukomski Brothers Co., Detroit, Mich.  
McCambridge Co., Philadelphia, Pa.  
Marvel—Detroit Marvel Brass Mfg. Co., Detroit, Mich.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Miller Foundry & Spec. Co., North Tonawanda, N. Y.  
Mott Iron Works, J. L., Trenton, N. J.  
Murphy—Murphy Specialty Co., Milwaukee, Wis.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
New Jersey Tube Co., New York, N. Y.  
Novelty—J. D. Johnson Co., Philadelphia, Pa.  
Park & McKay Co., Detroit, Mich.

Richardson-Phoenix Co., Milwaukee, Wis.  
Ross & Gade Co., Inc., New York.  
Rudolph—Franklin Brass Mfg. Co., Philadelphia, Pa.  
Rudolph—John D. Johnson, Philadelphia, Pa.  
Rudolph—Alfred J. Rudolph Co., Philadelphia, Pa.  
Rumsey Mfg. Co., L. M., St. Louis, Mo.  
Salem Brass & Iron Mfg. Co., Salem, N. J. (brass)  
Sanitary Co. of America, The, Linfield, Pa.  
Savill's, Thomas, Sons, Philadelphia, Pa.  
Scour—Federal-Huber Co., Chicago, Ill.  
S. & K.—Street & Kent Mfg. Co., Chicago, Ill.  
Sieben—Prier Brass Mfg. Co., Kansas City, Mo.  
Standard Brass Casting Co., Oakland, Calif.  
Tangential Inlet—American Foundry & Mfg. Co., St. Louis, Mo.

United—United Brass Mfg. Co., Cleveland, O.  
Upon Floor—McCormick Mfg. Co., Dayton, O.  
Webb, F. W., Mfg. Co., Boston, Mass., Trade names  
—Beason, Belmont, Deep-Seal, Easton, Hanover,  
Paxton, Rex, Richmond, Scour.

Wise, J. B., Inc., Watertown, N. Y.  
Wolverine Brass Works, Grand Rapids, Mich.

Wolverine Foundry Co., Detroit, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

## TRAPS, BELL.

Acheson Mfg. Co., Braddock, Pa.  
Adams—The Adams Co., Dubuque, Ia.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Barber Mfg. Co., The, Ashtabula, O.  
Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
Edwardsville Brass Co., Edwardsville, Ill.  
Exeter Brass Works, Exeter, N. H.  
Fee & Mason Mfg. Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Indiana Foundry Co., Indiana, Pa.  
Jones Hollow Ware Co., Baltimore, Md.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Rundie Mfg. Co., Milwaukee, Wis.  
Zurn, J. A., Mfg. Co., Erie, Pa.

## TRAPS, BOTTLE.

Modern Iron Works, Quincy, Ill.

## TRAPS, BRASS.

(See "Traps, Basin," and "Traps, Bath.")

## TRAPS, CAST IRON.

(For Baths, Sinks and Lavatories.)

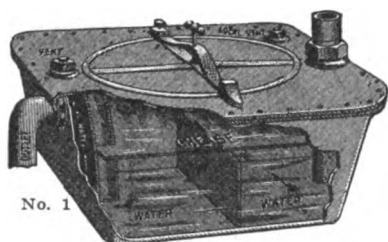
Advance—J. A. Zurn Mfg. Co., Erie, Pa. (P. Cast Iron, S. Cast Iron, Bottle).  
American Foundry & Mfg. Co., St. Louis, Mo.  
Deep Seal—Jas. H. Young Co., Boston, Mass.  
Fee & Mason Mfg. Co., New York, N. Y.  
Glenn Mfg. Co., St. Charles, Ill.  
Jumbo Heater & Mfg. Co., Cleveland, O.  
Kretschmer Mfg. Co., Dubuque, Ia.  
McDonald, A. Y., Mfg. Co., Dubuque, Ia.  
Miller Foundry & Spec. Co., No. Tonawanda, N. Y.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Sanitary Company of America, Linfield, Pa.

## TRAPS, CATON BASIN.

American Foundry & Mfg. Co., St. Louis, Mo.  
Dale—Standard Brass & Iron Works, Milwaukee, Wis.  
Murphy—Murphy Specialty Co., Milwaukee, Wis.

## TRAPS, CELLAR FLOOR AND DRAINAGE.

Abendroth Bros., Port Chester, N. Y.  
Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Bignall Co., The, Medina, N. Y.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Dreher, Ernest A., Newark, N. J.  
Dunstan—Glenn Mfg. Co., St. Charles, Ill.  
Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
711—Essex Foundry, Newark, N. J.  
Excello—Cooper Foundry Co., The, Atchison, Kans.  
Foster—Foster, C. H., St. Louis, Mo. (hinged).  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Jones Hollow Ware Co., Baltimore, Md.  
Kretschmer Mfg. Co., Dubuque, Ia.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.



## EXCELSIOR Grease Trap

Manufactured by  
**McGURRIN SUPPLY COMPANY**  
Grand Rapids, Mich.



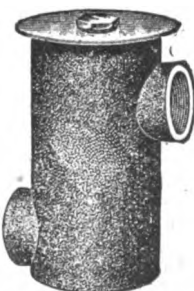
Meier Trap Factory, Upper Sandusky, O.  
Miller Foundry & Specialty Co., North Tonawanda.  
Mott Iron Works, The J. L., Trenton, N. J.  
Murphy Specialty Co., Milwaukee, Wis.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Pittsburgh Valve & Fittings Co., Barborton, O.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Sanitary Company of America, Linfield, Pa.  
Seattle Brass Co., Seattle, Wash.  
Speakman Co., Wilmington, Del.  
Victor—Victor Brass Mfg. Co., The, Cleveland, O.

### TRAPS, DRUM.

Acheson—Acheson Mfg. Co., Braddock, Pa.  
Acme—Compound Injector & Specialty Co., Chicago, Ill.  
Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
Alabama Pipe & Foundry Co., Anniston, Ala.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Baker Lead Mfg. Co., Worcester, Mass.  
Blake—Blake Specialty Co., Inc., Rock Island, Ill.  
Blatchford—E. W. Blatchford & Co., Chicago, Ill.  
B. B.—Boston Brass Co., Waltham, Mass.  
Boosey's, Boston Deep Seal—Greenwood Mfg. Co., Detroit, Mich.  
Chicago Pipe Co., Chicago, Ill.  
Clarke—Robert Clarke, Brooklyn, N. Y.  
Clarksville Foundry & Machine Works, Clarksville, Tenn.  
Cudell, F. E., Cleveland, O.  
Dearborn Brass Co., Cedar Rapids, Ia.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Glenn Mfg. Co., St. Charles, Ill.  
Guilanderland Foundry Co., Guilanderland, N. Y.  
Hawks—Hugo Mfg. Co., Duluth, Minn.  
Hammond—Byrd Iron Co., Birmingham, Ala.  
Jumbo Heater & Mfg. Co., Cleveland, O.  
Lukomski Brothers Co., Detroit, Mich.  
Lynn—Central Foundry Co., New York, N. Y.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
Milwaukee Flush Valve Co., Milwaukee, Wis.  
Modern Iron Works, Quincy, Ill.  
Nelson, N. O., Mfg. Co., St. Louis, Mo.  
Park & McKay Co., Detroit, Mich.  
Prier Brass Mfg. Co., Kansas City, Mo.  
Rabe Pipe & Foundry Co., Inc., Chattanooga, Tenn.  
Raymond Lead Co., Chicago, Ill.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
Robertson Lead Co., James, Baltimore, Md.  
Rundle Mfg. Co., Milwaukee, Wis.  
Sanitary Company of America, Linfield, Pa.  
Seattle Brass Co., Seattle, Wash.  
Standard—Central Brass Works, Kansas City, Mo.  
Standard Foundry Co., Anniston, Ala.  
Stewart Heater Co., Buffalo, N. Y.  
Triumph—J. W. Kellar, Chicago, Ill.

## ADVANCE Drum and "P" Traps

The cuts show  
our 4x8 1/2  
Drum Trap  
with N. P.  
enamed cover  
and "P" Trap with  
female outlet.  
Send for Catalog  
showing our full line



**J. A. ZURN MFG. CO.**

**Erie, Pa.**

Turner Lead Co., East St. Louis, Ill.  
Union Metal Works, Chelsea, Mass.  
United Lead Co., New York, N. Y.  
Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.  
Wolff Mfg. Co., Chicago, Ill.  
Wolverine Foundry Co., Detroit, Mich.

### TRAPS, PAN ELAST, COIL.

McAlear Mfg. Co., Chicago, Ill.  
Marsh—Jas. P. Marsh & Co., Chicago, Ill.

### TRAPS, FISH AND SHELL.

Berg—James B. Clow & Sons, Chicago, Ill.

### TRAPS, FLASK, BRASS.

Acheson Mfg. Co., Braddock, Pa.

### TRAPS, GARAGE.

Acme Peerless—Compound Injector & Specialty Co., Chicago, Ill.  
American Pump & Tank Co., New York.  
Broad Gauge Iron Works, Boston, Mass.  
Cooper Foundry Co., Atchison, Kan.  
Donovan—Sanitas Mfg. Co., Boston, Mass.  
Ellis Pat.—The John Wieben Co., New York, N. Y.  
Eureka—Eureka Mfg. Co., Indianapolis, Ind.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Hydraulic Oil Storage Co., New York, N. Y.  
Lynn—Central Foundry Co., New York, N. Y.  
McNutt, W. H., New York, N. Y.  
Reading—Reading Foundry & Supply Co., Reading, Pa.  
Sanitary Company of America, Linfield, Pa.  
Wade Iron Sanitary Mfg. Co., Chicago, Ill.

### TRAPS, GASOLINE.

McAlear Mfg. Co., The, Chicago, Ill.  
Strong, Carlisle & Hammond Co., The, Cleveland, O.  
♦ Swartwout—Ohio Body & Blower Co., Cleveland, O.

### TRAPS, GREASE.

Acme, Hygienic—Compound Injector & Specialty Co., Chicago, Ill.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Boylston Steam Specialty Co., Chicago, Ill.  
Casey-Hedges Co., The, Chattanooga, Tenn.  
Dehn's—Compound Injector & Specialty Co., Chicago.  
Em Ess Tucker—The Meyer-Sniffen Co., New York.  
Estabrook, Franklin, Boston—R. Estabrook's Sons, South Boston, Mass.  
Excelsior—McGurrin Supply Co., Grand Rapids, Mich.  
Federal-Huber Co., Chicago, Ill.  
Fleck Bros. Co., Philadelphia, Pa.  
♦ Fisher Governor Co., Chicago, Ill.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
Humphries Mfg. Co., The, Mansfield, O.  
Kieley & Mueller, New York, N. Y.  
McAlear Mfg. Co., The, Chicago, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Monmouth Clay Mfg. Co., Monmouth, Ill.  
Mott Iron Works, The J. L., Trenton, N. J.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Parker—M. L. Parker, Freeport, Ill.  
Peck Bros. & Co., The, New Haven, Conn.  
Peters—Steam Appliance Co., The, West Allis, Wis.  
Reading—Reading Foundry & Supply Co., Reading, Pa.  
Robertson Lead Co., James, Baltimore, Md.  
Rundle—Rundle Mfg. Co., Milwaukee, Wis. (Porcelain enameled.)  
Rundle-Spence Mfg. Co., Milwaukee, Wis.  
Sieben—Prier Brass Mfg. Co., Kansas City, Mo.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Tucker—J. L. Mott Iron Works, Trenton, N. J.  
Wade—Wade Iron Sanitary Mfg. Co., Chicago, Ill.  
Webco, Beverly—F. W. Webb Mfg. Co., Boston, Mass.  
Wolff Mfg. Co., Chicago, Ill.  
Winslow & Co., Inc., Portland, Me.

### TRAPS, GROUND, FOR CATCHING MOLES.

Heartley Machine Variety Iron & Tool Works, Toledo, Ohio.

**TRAPS, HAIR, BARBERS' LAVATORY.**

Hygienic—Compound Injector & Specialty Co., Chicago, Ill.

**TRAPS, HAND, CLAY TARGET THROWING.**

♦ Du Pont—E. I. du Pont, de Nemours & Co., Wilmington, Del.

**TRAPS, HOPPER.**

American Foundry & Mfg. Co., St. Louis, Mo.  
I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
Jones Hollow Ware Co., Baltimore, Md.  
Nelson, N. O. Mfg. Co., St. Louis, Mo.  
Union Sanitary Works, Noblesville, Ind.

**TRAPS, HYDRANT.**

American Foundry & Mfg. Co., St. Louis, Mo.  
Glenn Mfg. Co., St. Charles, Ill.  
Wheeling Sanitary Mfg. Co., Wheeling, W. Va.

**TRAPS, LAUNDRY TRAY.**

Acme—Acme Mfg. Co., Bangor, Me.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Euclid Stone & Brick Co., Cleveland, O. (Trade names—Genuine Euclid Stone, Lakewood, Glas-Rox, Cuyahoga.)  
Greenwood Mfg. Co., Detroit, Mich.  
Marvel—Detroit Marvel Brass Mfg. Co., Detroit, Mich.  
Mott Iron Works, The J. L. Trenton, N. J.  
Murphy—Murphy Specialty Co., Milwaukee, Wis.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Rudolph—Alfred J. Rudolph, Philadelphia, Pa.  
Yoo—Joseph H. Young Co., Boston, Mass.

**TRAPS, LEAD.**

American Lead Co., Pittsburgh, Pa.  
American Smelters Securities Co., San Francisco, Cal.  
Baker Lead Mfg. Co., Worcester, Mass.  
Blatchford—E. W. Blatchford Co., Chicago, Ill.  
B. E.—Boston Brass Co., Waltham, Mass.  
Bower—The Monarch Brass Co., Cleveland, O.  
Chadwick-Boston Lead Co., Boston, Mass.  
Clarke—Robert Clarke, Brooklyn, N. Y.  
Clean Sweep—Detroit Sanitary Supply Co., Detroit.  
Cudell, F. E., Cleveland, O.  
Dubois—F. N. Dubois & Co., Inc., The, New York, N. Y.  
Eagle-Fischer Lead Co., Cincinnati, O.  
Gardiner Metal Co., Chicago, Ill.  
Johnson, J. D., Philadelphia, Pa.  
Lukomski Brothers Co., Detroit, Mich.  
McCambridge Co., Philadelphia, Pa.  
Monarch—The Monarch Brass Co., Cleveland, O.  
National Lead Co., New York, N. Y.  
Nelson Mfg. Co., N. O., St. Louis, Mo.  
Newton—Providence Steam Traps Co., Providence, R. I.  
North American Copper Co., New York, N. Y.  
Northwest Lead Co., Seattle, Wash.  
Robertson Lead Co., James, Baltimore, Md.  
Rochester Lead Works, Rochester, N. Y.  
Ulco—Raymond Lead Co., Chicago, Ill.  
Union Metal Works, Chelsea, Mass.  
United Lead Co., St. Paul, Minn.  
United Lead Co., New York, N. Y.  
Wensley Metal Products Co., Denver, Colo.  
Windsor Mfg. Co., Milwaukee, Wis.

**TRAPS AND SEPARATORS, MOISTURE, AIR LINES.**

Nicholson, W. H., Co., Wilkesbarre, Pa.

**TRAPS, OIL.**

Kielmul—Kieley & Mueller, New York, N. Y.  
K. & T.—Klipfel Mfg. Co., Chicago, Ill.  
McAlear Mfg. Co., The, Chicago, Ill.  
Strong, Carlisle & Hammond Co., The, Cleveland, O.  
Victor—Wright-Austin Co., Detroit, Mich.

**TRAPS, PUMPING.**

Bundy—Nashua Machine Co., Inc., Nashua, N. H.  
McAlear Mfg. Co., The, Chicago, Ill.  
Templeton Mfg. Co., Hyde Park, Boston, Mass.

**TRAPS, RADIATOR.**

Autovalve—Thermograde Valve Co., Boston, Mass.  
Bishop & Babcock Co., The, Cleveland, O.  
Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
Hoffman Specialty Co., Waterbury, Conn.  
Hutchison Vapor Heating Co., Washington, D. C.  
Illinois Engineering Co., Chicago, Ill.  
Marsh, Jas. P. & Co., Chicago, Ill.  
McAlear Perfection—McAlear Mfg. Co., Chicago, Ill.  
Monash—Monash-Younger Co., Chicago, Ill.  
O. E.—O. E. Specialty Mfg. Co., Milwaukee, Wis.  
Roath Thermotrap—Roath Mfg. Co., Akron, O.  
Rois Heat Control Co., Brooklyn, N. Y.  
Sarco Co., Inc., New York, N. Y.

Sterling—Sterling Engineering Co., Milwaukee, Wis.  
Strong, Carlisle & Hammond Co., Cleveland, O.  
Trane—Plant Engineering & Equipment Co., New York, N. Y.  
Webster—Warren Webster & Co., Camden, N. J.

**TRAPS AND DRAINS, REFRIGERATOR.**

Advance—J. A. Zurn Mfg. Co., Erie, Pa.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Boosey's—Greenwood Mfg. Co., Detroit, Mich.  
Central—The Central Brass Mfg. Co., Cleveland, O.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Dixie—Plumbers Specialty Mfg. Co., St. Louis, Mo.  
Eclipse—Kupferle, John C., Foundry Co., St. Louis, Mo.  
Federal—Federal-Huber Co., Chicago, Ill.  
Fee & Mason Mfg. Co., New York, N. Y.  
Foster—C. H. Foster, St. Louis, Mo.  
Glenn Mfg. Co., St. Charles, Ill.  
Hugo Mfg. Co., Duluth, Minn.  
Jumbo Heater & Mfg. Co., Cleveland, O.  
Marvel—Detroit Marvel Brass Mfg. Co., Detroit, Mich.  
Modern Iron Works, Quincy, Ill.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
Sanitary Company of America, Linfield, Pa.  
Shirk—Shirk Refrigerator Co., Chicago, Ill.  
Wolverine Brass Works, Grand Rapids, Mich.  
Wolverine Foundry Co., Detroit, Mich.  
Worns & Kemp, New York, N. Y.

**TRAPS, RUNNING.**

Acheson Mfg. Co., Braddock, Pa.  
Acme—Compound Injector & Specialty Co., Chicago, Ill.  
American Foundry & Mfg. Co., St. Louis, Mo.  
Blake Specialty Co., Rock Island, Ill.  
Central Foundry Co., New York, N. Y.  
Cudell, F. E., Cleveland, O.  
Essex Foundry, Newark, N. J.  
Foster—C. H. Foster, St. Louis, Mo.  
Franklin Pipe & Foundry Co., Chicago, Ill.  
Glenn Mfg. Co., St. Charles, Ill.  
Greenwood Mfg. Co., Detroit, Mich.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Pittsburgh Valve & Fittings Co., Barberton, O.  
Sanitary Company of America, Linfield, Pa.  
Zurn, J. A., Mfg. Co., Erie, Pa.

**TRAPS, SAND.**

Haines, Jones & Cadbury Co., Philadelphia, Pa.  
Sanitary Company of America, Linfield, Pa.

**TRAP SCREWS.**

(See "Screws, Trap.")

**TRAPS, SEDIMENT.**

Rudolph—Alfred J. Rudolph Co., Philadelphia, Pa.  
Universal—Richard J. Flinn, West Roxbury, Mass.

**TRAPS, SINK.**

Acheson Mfg. Co., Braddock, Pa.  
American Brass Novelty Co., Grand Haven, Mich.  
American Foundry & Mfg. Co., St. Louis, Mo.  
American Fin Co., The, Waterbury, Conn.  
American Sanitary Mfg. Co., Abingdon, Ill.  
Barnes Mfg. Co., The, Mansfield, O.  
Concord Foundry Co., Concord, N. H.  
Crawford—F. W. Webb Mfg. Co., Boston, Mass.  
Cudell, F. E., Cleveland, O.  
Dearborn Brass Co., Cedar Rapids, Ia.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Diamond—McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Duplex-Superior—Duplex Mfg. Co., Superior, Wis. (cast iron).  
Essex Foundry, Newark, N. J.  
Fleck Bros. Co., Philadelphia, Pa.  
Frost Mfg. Co., Kenosha, Wis.  
Glenn Mfg. Co., St. Charles, Ill.  
Greenwood Mfg. Co., Detroit, Mich.  
Guilanderland Foundry Co., Guilanderland, N. Y.  
Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
Haydenville Co., The, Haydenville, Mass.  
Keystone Brass Works, Inc., Erie, Pa.  
Loyal Brass Co., Cleveland, O.  
Lukomski Brothers Co., Detroit, Mich.  
Marvel—Detroit Marvel Brass Mfg. Co., Detroit, Mich.  
Monarch—The Monarch Brass Co., Cleveland, O.  
Mott Iron Works, The J. L. Trenton, N. J.  
Mueller Mfg. Co., H., Decatur, Ill.  
Murphy—Murphy Specialty Co., Milwaukee, Wis.  
Nelson, N. O. Mfg. Co., St. Louis, Mo.  
New Jersey Tube Co., New York, N. Y.  
Powers Mfg. Co., Ossining, N. Y.  
Protector—Federal-Huber Co., Chicago, Ill.  
Reading—Reading Foundry & Supply Co., Reading, Pa.  
Richmond Foundry & Mfg. Co., Richmond, Va.  
Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
Ross Supply Co., Greenville, O.  
Rudolph—Alfred J. Rudolph Co., Philadelphia, Pa.

# McDANIEL Improved Steam Trap

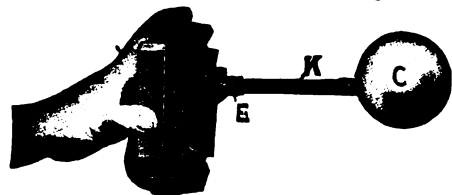
## For Steam Pressures up to 250 Lbs. Pressure

All working parts are connected to the Bonnet. Inlet and Outlet pipes are connected to body and need not be disturbed when making repairs.

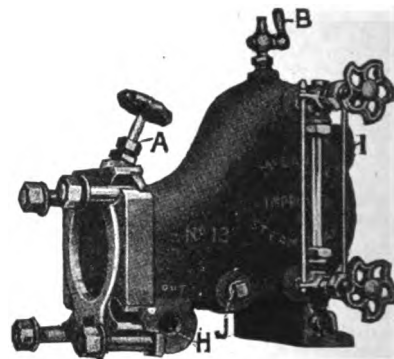
Steam can't blow through. Always maintains water seal over discharge valve and cannot be flooded with sudden flushes of water.

All Working  
Parts are here

Quick and Easy  
to take apart



This Steam Trap is a continuous drainer. Works all the time, drains all the water of condensation and holds back the steam. Water gauge on side of trap shows how the trap is working.



*Put one in your plant on trial and see for yourself how superior this trap works*

WE ALSO MANUFACTURE

Reducing Valves for  
Steam, Water and Air

Pump Governors  
Ejectors

Relief Valves  
Steam Separators

SEND FOR COMPLETE CATALOGUE

### Watson & McDaniel Co.

Established  
1878

140 N. 7th STREET  
Philadelphia, Pa.

Rundle Mfg. Co., Milwaukee, Wis.  
Salem Brass & Iron Mfg. Co., Salem, N. J. (brass).  
Sanitary Company of America, Linfield, Pa.  
Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
Swett Iron Works, A. L., Medina, N. Y.  
Wise, J. B., Inc., Watertown, N. Y.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.  
Young, Joseph H., Co., Boston, Mass. Trade names—  
Adapt, Beverly, Bay State, Hub, Salem, Springfield, Yco.

#### TRAPS, SOIL PIPE, ADJUSTABLE.

Central Foundry Co., New York, N. Y.

#### TRAPS, STEAM.

Albany—Albany Steam Trap Co., Albany, N. Y.  
American Foundry & Mfg. Co., St. Louis, Mo.  
♦ American Ideal—American Steam Gauge & Valve  
Mfg. Co., Boston, Mass.  
Anderson—The V. D. Anderson Co., Cleveland, Ohio.  
Armstrong—Armstrong Machine Works, Three Rivers,  
Mich.  
Barton—Automatic Steam Trap & Specialty Co., Cleve-  
land, O.  
Bates—Edward P. Bates, Syracuse, N. Y. (low pres-  
sure).  
Best—Best Mfg. Co., Pittsburgh, Pa.  
Bishop & Babcock Co., The, Cleveland, O.  
Boston—Johnson Vapor Heating Co., Boston, Mass.  
Boylston—Boylston Steam Specialty Co., Chicago.  
Brown—D. G. C. Valve Co., New York, N. Y.  
Bucket—John Acton, Brooklyn, N. Y.  
Bundy—Bundy Steam Trap Co., Nashua, N. H.  
Burrows—Burrows Mfg. Co., York, Pa.  
Chapman—Watson & McDaniel Co., Philadelphia, Pa.  
Class B. C. Sidelug—Nason Mfg. Co., New York,  
N. Y.  
♦ Cochrane—H. S. B. W. Cochrane Corporation, Phila-  
delphia, Pa.  
Coenco—Consolidated Engineering Co., Chicago, Ill.  
Columbia—Watson & McDaniel Co., Philadelphia, Pa.  
Consolidated Car Heating Co., Albany, N. Y.  
♦ Cookson—The D. T. Williams Valve Co., Cincinnati.  
"Corlis"—The Steam Appliance Co., Milwaukee, Wis.  
Corliss Valve—Plant Engineering & Equipment Co.,  
New York, N. Y.  
Cranellit—Crane Co., Chicago, Ill.  
Crook, H. E., Co., Inc., Baltimore, Md.  
Curtis—Julian d'Este Co., Boston, Mass. (balanced).  
Davis—G. N. Davis Regulator Co., Chicago, Ill.

Detroit—American Blower Co., Detroit, Mich.  
♦ Diamond Guarantee—Jenkins Bros., New York, N. Y.  
Dinkle—Flush Valve Co., New York, N. Y.  
Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
Eclipse—Illinois Engineering Co., Chicago, Ill.  
Economic—The Economic Specialty Co., Chicago, Ill.  
Elliott—Elliott Co., Pittsburgh, Pa.  
Emergency (High Pressure)—Wright Austin Co.,  
Detroit, Mich.  
♦ Empire, American—American District Steam Co.,  
North Tonawanda, N. Y.  
Farnsworth Tilt—Farnsworth Co., Conshohocken, Pa.  
Eureka Steam Trap Co., Chicago, Ill.  
Fleur de Lis—Boston Steam Specialty Co., Boston.  
Fisher Governor Co., The, Chicago, Ill.  
Flinn—B. F. Sturtevant Co., Boston, Mass.  
Foskett-Bishop—The Foskett & Bishop Co., New  
Haven, Conn.  
♦ Garden City—Garden City Fan Co., Chicago, Ill.  
G. F. E.—General Fire Extinguisher Co., New York,  
N. Y.  
Garrett, W. D., & Co., New York, N. Y.  
Garrett's McKellar—W. T. Garrett & Co., San Fran-  
cisco, Cal.  
Geipel—John Platt & Co., New York, N. Y.  
Gold Excelsior—Gold Car Heating & Lighting Co.,  
Brooklyn, N. Y.  
Golden—Golden-Anderson Valve Specialty Co., Pitts-  
burgh, Pa.  
Harris Improved—William S. Harris & Co., Philadel-  
phia.  
Hennebelle, F., Co., South Chicago, Ill.  
Herbert Boller Co., The, Chicago, Ill.  
Holly—American District Steam Co., North Tona-  
wanda, N. Y.  
Holmberg Steam Trap Co., The, Linsborg, Kans.  
Hornung, J. C., Chicago, Ill.  
Hughes Bros. Brass Works, Scranton, Pa.  
Hutchison Vapor Heating Corp., Washington, D. C.  
Hydromatic—The Ohio Body & Blower Co., Cleve-  
land, O.  
Illinois Engineering Co., Chicago, Ill.  
Illinois Malleable Iron Co., Chicago, Ill.  
♦ Johns-Manville, Incorporated, New York, N. Y.  
Kelly Controller Co., Chicago, Ill.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Ketchum—Boston Steam Specialty Co., Boston, Mass.  
Kilemul—Kieley & Mueller, New York, N. Y.  
Kitts Steam Specialties Co., Oswego, N. Y.  
K. & T.—Kilpfel Mfg. Co., Chicago, Ill.  
Komo—The Linton Machine Co., New York, N. Y.  
K. & T.—Kilpfel Mfg. Co., Chicago, Ill.

Locke—Locke Regulator Co., Salem, Mass.  
 Lawler's—Lawler Regulator Co., New York, N. Y.  
 Lindstrom—Allentown Experimental Work, Allentown, Pa.  
 Lyrocco—Lyttton-Rowe Mfg. Co., Norfolk, Va.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McAuley Automatic Trap Co., Pittsburgh, Va.  
 McCann's—Hussey, McCann & Co., New York.  
 McDaniel Specialty and McDaniel Improved—Watson & McDaniel Co., Philadelphia, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Marsh, Jas. P., Co., Chicago, Ill.  
 Mitchell & Co., Inc., W. K., Philadelphia, Pa.  
 Monahan, Thos. W., New York.  
 Monash 20—Monash-Younger Co., Chicago, Ill.  
 Morehead—Morehead Mfg. Co., Detroit, Mich.  
 Nason Pattern—Hoffmann Mfg. Co., Milwaukee, Wis.  
 Nason, Class B and Class C and Sidelug—Nason Mfg. Co., New York, N. Y.  
 Nason Sidelug—Nason Mfg. Co., New York, N. Y.  
 Nason, Standard—American Foundry & Mfg. Co., St. Louis, Mo.  
 Nason-Vesuvius—Nason Mfg. Co., New York, N. Y.  
 National Dry Kiln Co., The, Indianapolis, Ind.  
 Newton—Providence Steam Trap Co., Providence, R. I.  
 New Standard—Kieley & Mueller, New York, N. Y.  
 Nicholson—W. H. Nicholson & Co., Wilkes-Barre, Pa.  
 O. K.—Kitts Steam Specialty Co., Oswego, N. Y.  
 Old Reliable—John Acton, Brooklyn, N. Y.  
 F. & C.—The Pratt & Cady Co., Inc., Hartford, Conn.  
 Patterson-Kelley Co., The, New York, N. Y.  
 Peck, Stow & Wilcox Co., Southington, Conn.  
 Peerless—Boylston Steam Specialty Co., Chicago, Ill.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Powers—James Bonar & Co., Pittsburgh, Pa.  
 Providence—General Fire Extinguisher Co., Providence, R. I.  
 ♦ Reliance—The Reliance Gauge Column Co., Cleveland, O.  
 Reliance—The Paul B. Huyette Co., Inc., Philadelphia, Pa.  
 R. & D.—Row & Davis Engineers, Inc., New York.  
 Rochester Vacuum Valve Co., Rochester, N. Y.  
 Rutzler Co., E., New York, N. Y.  
 Sarco—Sarco Co., Inc., New York, N. Y.  
 Stickle—Open Coil Heater & Purifier Co., Indianapolis.  
 Squires, The Genuine—The C. E. Squires Co., Cleveland, O.  
 Standard Nason Pattern—Glenn Mfg. Co., St. Charles, Ill.  
 Steinmizt—American Safety Lamp & Mine Sup. Co., Scranton, Pa.  
 Sterling—The Templeton Mfg. Co., Hyde Park, Boston, Mass.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.  
 Tobey—The J. L. Mott Iron Works, Trenton, N. J.  
 Tucker, Webco—F. W. Webb Mfg. Co., Boston, Mass.  
 Turbo—John F. Robertson Co., Pittsburgh, Pa. (bucket type).  
 Twin Tube—Bourdon Co., Burlington, Vt.  
 Tillotson Humidifier Co., Providence, R. I.  
 Tyler—Tyler Underground Heating Systems, Pittsburgh, Pa.  
 Victor (Low Pressure)—Wright-Austin Co., Detroit, Mich.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williams—The Williams Gauge Co., Pittsburgh, Pa.  
 Wyoming—W. H. Nicholson & Co., Wilkes-Barre, Pa.  
 Ziermore Regulator Co., Johnsonburg, Pa.

**TRAPS, STEAM, EXPANSION.**

Barton—Automatic Steam Trap & Specialty Co., Cleveland, O.  
 Columbia—Watson, McDaniel Co., Philadelphia, Pa.  
 McDaniel & McDaniel Improved—Watson & McDaniel Co., Philadelphia, Pa.  
 Stewart Heater Co., Buffalo, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**TRAPS, STEAM, NON-RETURN.**

Albany—Albany Steam Trap Co., Albany, N. Y.  
 Bundy—Bundy Steam Trap Co., Nashua, N. H.  
 Farnsworth—Farnsworth Mfg. Co., Conshohocken, Pa.  
 Kiehmul—Kieley & Muller, New York, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McDaniel & McDaniel Improved—Watson & McDaniel Co., Philadelphia, Pa.  
 Templeton Mfg. Co., The, Hyde Park, Boston, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 W. A.—Wright-Austin Co., Detroit, Mich.

**TRAPS, STEAM, RETURN.**

Albany—Albany Steam Trap Co., Albany, N. Y.  
 Bundy—Bundy Steam Trap Co., Nashua, N. H.  
 Detroit—American Blower Co., Detroit, Mich.  
 Dunham, C. A., Co., Inc., Chicago, Ill.  
 ♦ Elliott—Elliott Co., Jeannette, Pa.  
 Farnsworth—Farnsworth Mfg. Co., Conshohocken, Pa.

Fleur de Lis—Boston Steam Specialty Co., Boston, Mass.  
 General Condenser Co., Philadelphia, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Lyttton, Thermo—Lyttton Mfg. Corp., Franklin, Va.  
 McAlear—McAlear Mfg. Co., Chicago, Ill.  
 Morehead—Morehead Mfg. Co., Detroit, Mich.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Roath—Roath Mfg. Co., Akron, O.  
 Sterling—Sterling Engineering Co., Milwaukee, Wis.  
 Sterling-Templeton Mfg. Co., Hyde Park, Boston, Mass.  
 Strong—Strong Carlisle & Hammond Co., Cleveland, O.  
 Trane Co., The, LaCrosse, Wis.  
 Tyler Underground Heating System, Pittsburgh, Pa.

**TRAPS, STEAM, THERMOSTATIC.**

Barton—Automatic Steam Trap & Specialty Co., Cleveland, O.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Hoffman Specialty Co., Waterbury, Conn.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Marsh, Jas. P., Co., Chicago, Ill.  
 National—National Steam Specialty Co., Chicago, Ill.  
 Richards—Automatic Steam Trap Co., The, New Haven, Conn.  
 Trane Co., The, LaCrosse, Wis.  
 Vapor Regulator Co., Philadelphia, Pa.

**TRAPS, STEAM, WATER SEAL.**

Barton—Automatic Steam Trap & Specialty Co., Cleveland, O.  
 Garrett, W. D., & Co., New York, N. Y.  
 Hoffman Specialty Co., New York, N. Y.  
 Locke—Locke Regulator Co., Salem, Mass.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Wiley—Simplex Heating Specialty Co., Lynchburg, Va.  
 Warren Webster & Co., Camden, N. J.

**TRAPS, URINAL.**

Acheson Mfg. Co., Braddock, Pa.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Clarke—Robert Clarke, Brooklyn, N. Y.  
 Delany—The Columbus Brass Co., Columbus, O.  
 Dighton—F. W. Webb Mfg. Co., Boston, Mass.  
 Exeter Brass Works, Exeter, N. H.  
 Federal—Federal-Huber Co., Chicago, Ill.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydensville Co., The, Haydensville, Mass.  
 Lukowski Brothers Co., Detroit, Mich.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 New Jersey Tube Co., New York, N. Y.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Upton—Haines, Jones & Cadbury Co., Philadelphia.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Yale—F. W. Webb Mfg. Co., Boston, Mass.

**TRAPS, VACUUM.**

Barton—Automatic Steam Trap & Specialty Co., Cleveland, O.  
 Bishop & Babcock Co., The, Cleveland, O.  
 Bundy—Bundy Steam Trap Co., Nashua, N. H.  
 Cranetilt—Cranet Co., Chicago, Ill.  
 Dunham, C. A., Co., Inc., Chicago, Ill.  
 Farnsworth Mfg. Co., Conshohocken, Pa.  
 Hoffman Specialty Co., Waterbury, Conn.  
 Illinois Engineering Co., Chicago, Ill.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Konold, M. J., Pittsburgh, Pa.  
 Lyttton—Lyttton Mfg. Corp., Franklin, Va.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Morehead Mfg. Co., Detroit, Mich.  
 Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 P-P—Peerless Engineering Co., Chicago, Ill.  
 Rado Co., The, Milwaukee, Wis.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Stickle—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Sterling—Templeton Mfg. Co., The, Hyde Park, Boston, Mass.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Tyler Underground Heating System, Pittsburgh, Pa.

**TRAPSCREWS.**

(See "Screws, Trap.")

**TRAYS, BRASS & COPPER, FOR OILING SETS.**

(See also "Sets, Engineer's Oil.")

Consolidated Mfg. Co., Dayton, Ohio.

**TRAYS, LAUNDRY, CEMENT, CONCRETE, GRANITE AND GRANITINE.**

Acme Granolithic Co., Boston, Mass.  
 Adams, E. G., Kingston, N. Y.  
 Ajax—Chicago Granitine Mfg. Co., Chicago, Ill.

Guaranteed "AJAX" and "PRINCESS"  
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 Sanitary, Durable and Beautiful. Prompt Shipments. Perfect  
 Fixtures. Prices Right.  
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 Factories: Chicago, Ill.; Omaha, Neb.; Cincinnati, O.

Anchor Stone Co., Minneapolis, Minn.  
 Atlas Wash Tray Co., New Haven, Conn.  
 Buffalo Wash Tray Works, Buffalo, N. Y.  
 Champion—Samuel Sloan & Co., Rochester, N. Y.  
 Crescent Concrete—Economy Concrete Co., New Ha-  
 ven Conn. (enameled).  
 Diamond—Robinson Stoneware Co., Brooklyn, N. Y.  
 Donders & Nelson, Portland, Ore.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Economy—Economy Concrete Co., New Haven, Conn.  
 Golden Gate—Thos. N. Furlong, San Francisco, Cal.  
 Hercules—Hercules Cement Products Co., San Fran-  
 cisco, Calif.  
 Nustone Products Corp., New York.  
 Princess—Chicago Granitine Mfg. Co., Chicago, Ill.  
 Scotch Granite—Robinson Stoneware Co., Brooklyn,  
 N. Y.  
 Weehawken—Household Granite Tub Co., New Haven,  
 Conn.  
 Weehawken—Peerless Granite Co., Weehawken, N. J.  
 Wesely—Chas. Wesely Co., Chicago, Ill.  
 Wessels—D. D. Wessels & Son, Detroit, Mich.

**TRAYS, LAUNDRY AND SINK  
 COMBINED.**

Ajax—Chicago Granitine Mfg. Co., Chicago, Ill.  
 Euclid—Euclid Mfg. Co., Paden City, W. Va.  
 Clow's—James B. Clow & Sons, Chicago, Ill.  
 Graham—The J. L. Mott Iron Works, Trenton, N. J.  
 Kingston—Kingston Granite Tub Works, Kingston,  
 N. Y.  
 Kohler—Kohler Co., Kohler, Wis.  
 Pacific—The Cahill Iron Works, Chattanooga, Tenn.  
 Princess—Chicago Granitine Mfg. Co., Chicago, Ill.  
 Spacesaver—Space Saving Appliance Co., New York.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Wesely—Wesely Co., Chas., Chicago, Ill.  
 Woodley—Woodley Slate Co., Bangor, Pa.  
 Wolff Mfg. Co., Chicago, Ill.

**TRAYS, LAUNDRY, METALLIC.**

Wesely Economy—Chas. Wesely Co., Chicago, Ill.

**TRAYS, LAUNDRY, PORCELAIN AND CHINA.**

Avon—Wheeling Sanitary Mfg. Co., Wheeling, W.  
 Va.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Eljer Co., Cameron, W. Va.  
 Eureka—Cochran, Drugan & Co., Trenton, N. J.  
 Federal-Huber Co., Chicago, Ill.  
 Fords Porcelain Works, Perth Amboy, N. J.  
 German-American Stonework Works, New York, N. Y.  
 Graham Chemical Pottery Works, Chas., Brooklyn.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 James B. Clow & Sons, Chicago, Ill.  
 Maddock's, Thos., & Sons Co., Trenton, N. J. (Trade  
 names—Porcomb, Portub, Portray.)  
 Monarch—Wolff Mfg. Co., Chicago, Ill.  
 Monument—Monument Pottery Co., Trenton, N. J.  
 Mott, J. L., Iron Works, Trenton, N. J. Trade names  
 —Wentworth, Wickliffe, Warren, Wadsworth,  
 Warwick, Wayne.  
 Pacific Sanitary Mfg. Co., San Francisco, Cal.  
 Perfection—American Porcelain Co., New Brighton, Pa.  
 Regal—Haines, Jones & Cadbury Co., Philadelphia.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Stellar—The John Douglass Co., Cincinnati, O.  
 Tepeco—Trenton Potteries Co., Trenton, N. J.

**TRAYS, LAUNDRY, PORCELAIN  
 ENAMELED.**

Avon—Wheeling Sanitary Mfg. Co., Wheeling, W.  
 Va.  
 Beaver—The John Douglas Co., Cincinnati, O.  
 Clow—James B. Clow & Sons, Chicago, Ill.  
 Duplex—Haines, Jones & Cadbury Co., Philadelphia.  
 Hajoca—Haines, Jones & Cadbury Co., Philadel-  
 phia, Pa.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Kohler—Kohler Co., Kohler, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Richmond Radiator Co., New York.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Twin—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Union Sanitary Works, Noblesville, Ind.  
 United States Sanitary Mfg. Co., Pittsburgh, Pa.  
 Wolff Mfg. Co., Chicago, Ill.

**EUCLID Stone  
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(20 years ago called "Cuyahoga")

have been manufactured and sold  
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 made for the purpose.

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**TRAYS, LAUNDRY, PORTABLE.**

Tabletubs—Reznor Mfg. Co., Mercer, Pa.

**TRAYS, LAUNDRY, SLATE.**

Alpha Slate Mfg. Co., The, Bangor, Pa.  
 Bangor Structural Slate Co., Bangor, Pa.  
 Bangor—The Union Slate Co., Bangor, Pa.  
 Butler & Son Co., Philip H., Somerville, Mass.  
 Empire—The New York Slate Works, New York, N. Y.  
 Fair Haven Marble & Marbleized Slate Co., Fair Ha-  
 ven, Vt.  
 Federal-Huber Co., Chicago, Ill.  
 Fleming Slate Co., Poultney, Vt.  
 Genuine Bangor—East Bangor Consolidated Slate Co.,  
 The, East Bangor, Pa.  
 James B. Clow & Sons, Chicago, Ill.  
 Lobb, Parry & Co., Danielsville, Pa.  
 McConnell Slate Co., Brooklyn, N. Y.  
 Nelson, N. O., Marble Co., Edwardsville, Ill.  
 Pennsylvania Structural Slate Co., Easton, Pa.  
 Penrhyn Slate Co., The, Middle Granville, N. Y.  
 Union Soapstone Co., Boston, Mass.  
 Woodley—Woodley Slate Co., Bangor, Pa.

**TRAYS, LAUNDRY, STONE.**

Ajax, Princess—Chicago Granitine Mfg. Co., Chicago,  
 Ill.  
 Alberene—Alberene Stone Co., Chicago, Ill.  
 Anchor—Anchor Stone Co., Minneapolis, Minn.  
 Asbestine Stone—Asbestine Stone Co., Boston, Mass.  
 Butler & Son Co., Philip H., Somerville, Mass.  
 Duro Stone—Wolff Mfg. Co., Chicago, Ill.  
 Hajocastone—Haines, Jones & Cadbury Co., Philadel-  
 phia, Pa.  
 Hampshire—Samuel Sloan & Co., Rochester, N. Y.  
 Lakewood—The Euclid Stone & Brick Co., Cleveland, O.  
 Nelson, N. O., Marble Co., Edwardsville, Ill.  
 Nustone—Household Granite Tub Co., New Haven,  
 Conn.  
 Our Leader—Alberene Stone Co., Chicago, Ill.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Standard Saw Mill Machinery Co., Erie, Pa.  
 Union Soapstone Co., Boston, Mass.  
 Wolff Mfg. Co., Chicago, Ill.

**TRAYS, LAUNDRY, WOODEN.**

Eagle Tank Co., Chicago, Ill.

**TRAYS, TOOL, FACTORY.**

Kirk & Blum Mfg. Co., Cincinnati, O.  
 Lyon Metallic Mfg. Co., Aurora, Ill.  
 Uhl Steel—Toledo Metal Furniture Co., Toledo, O.

**TRENDS, STAIR.**

Boston Belting Co., Boston, Mass.  
 Diamond Rubber Co., Inc., Akron, O.  
 Feralun, Bronzalun—American Abrasive Metals Co.,  
 New York, N. Y.  
 Hudson Mechanical Rubber Co., New York, N. Y.  
 Keenan Structural Slate Co., Bangor, Pa.  
 Newman Mfg. Co., The, Cincinnati, O.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Vulcalun—American Abrasive Metal Co., New York.

**TRIMMERS, DRAW OUT, UNIVERSAL.**

Perkins & Co., Grand Rapids, Mich.

**TRIMMERS, LUMBER.**

(See also "Machinery, Sawmill.")

American—American Saw Mill Machinery Co., Hach-  
 ettstown, N. J.  
 General Supply & Machine Co., Meridian, Miss.



Hill-Curtis Co., Kalamazoo, Mich.  
 ♦ **Hoosier**—The Sinker-Davis Co., Indianapolis, Ind.  
 Lane Mfg. Co., Montpelier, Vt.  
 Link Machinery Co., Jas. H., Williamsport, Pa.  
 Obermayer, S. Co., The, Cincinnati, Ohio.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Perkins & Co., Grand Rapids, Mich.  
 Standard Saw Mill Machinery Co., Erie, Pa.  
 Tower—Gordon Hollow Blast Grate Co., Greenville, Mich.  
 United States Machine Co., Williamsport, Pa.  
 Wheland—The Wheland Co., Chattanooga, Tenn.

**TRIMMERS, BASH.**

American—Mann Corporation, Kankakee, Ill.

**TRIMMERS, WOOD.**

Bauer, A. E., & Son, Chicago, Ill. (Rotary knife.)  
 Smith & Egge Mfg. Co., The, Bridgeport, Conn. (Hand.)

**TRIMMINGS, FULLER WORK.**

Haydenville Co., The, Haydenville, Mass.  
 Smith, E. C., Mfg. Co., Chicago, Ill.  
 Street & Kent Mfg. Co., Chicago, Ill.

**TRIMMINGS, URM.**

Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Richardson, Edro., Brass Co., Baltimore, Md.

**TRINITROTOLUOL.**

♦ Du Pont, E. I. de Nemours & Co., Wilmington, Del.

**TRIPDS AND LEVELS, SURVEYORS.**

Gurley—W. & L. E. Gurley, Troy, N. Y.

**TRIPPERS, CONVEYOR BELT.**

♦ Jeffrey Mfg. Co., The, Columbus, O.  
 Link-Belt Company, Chicago and Philadelphia.  
 Meese & Godfried Co., San Francisco, Cal.

**TRIPS, PNEUMATIC, FOR PUNCHES AND SHEARS.**

Baird Pneumatic Tool Co., Topeka, Kan.

**TROLLEYS, TRACKS AND TRAMWAYS, OVERHEAD.**

American—Barber-Foster Engineering Co., Cleveland, O.  
 A-P—Allith-Prouty Co., Danville, Ill.  
 Armstrong—Armington Engineering Co., Wickliffe, O.  
 Box & Co., Alfred, Inc., Philadelphia, Pa.  
 Broderick & Bascom Rope Co., St. Louis, Mo.  
 Brown Hoisting Machinery Co., Cleveland, O.  
 ♦ Brown—The Yale & Towne Mfg. Co., New York, N. Y.  
 Buch Foundry Equipment Co., York, Pa.  
 Buffalo Contractors Plant Corp., Buffalo, N. Y.  
 ♦ Chisholm-Moore Mfg. Co., Cleveland, O.  
 Cleveland Crane & Engineering Co., Wickliffe, O.  
 Coburn Trolley Track Mfg. Co., Holyoke, Mass.  
 Conco—H. D. Conkey & Co., Mendota, Ill.  
 Curtis & Co. Mfg. Co., St. Louis, Mo.  
 Curtis Pneumatic Machinery Co., St. Louis, Mo.  
 Delta—New Jersey Foundry & Machine Co., New York.  
 Dobbie Foundry & Machine Co., Niagara Falls, N. Y.  
 Euclid—Euclid Crane & Hoist Co., Euclid, O.  
 Farnham Mfg. Co., Buffalo, N. Y.  
 ♦ Ford Chain Block & Mfg. Co., Philadelphia, Pa.  
 ♦ Harrington, Edwin, Son & Co., Inc., Philadelphia, Pa.  
 Johnston & Jennings Co., The, Cleveland, O.  
 Lane Bros. Co., Poughkeepsie, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 Loudon Machinery Co., The, Fairfield, Ia.  
 ♦ Lovejoy Tool Works, Chicago, Ill.  
 Maris Bros., Philadelphia, Pa.  
 ♦ Matchless—Chisholm & Moore Mfg. Co., The, Cleveland, O.  
 Moore Co., The, Franklin, Winsted, Conn.  
 Moore, Franklin Co., Winsted, Conn.  
 Nuttal, R. D. Co., Pittsburgh, Pa.  
 O'Brien, James H., Scale & Supply Co., New York.  
 Over-Way—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Pa—Patterson Allen Engineering Co., Jersey City, N. J.  
 Parker, S. E., Chicago, Ill.  
 Patterson-Kelley Co., The, New York, N. Y.  
 Philadelphia Tramrail Co., Philadelphia, Pa.  
 Q. M. S.—Hanna Engineering Wks., Chicago, Ill.  
 Randall Tramrail Co., Philadelphia, Pa.  
 Reading Chain & Block Corp., Reading, Pa.  
 Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Roeper Crane & Hoist Works, Reading, Pa.  
 Round & Son, D., Cleveland, O.  
 Speidel, J. G., Reading, Pa.  
 ♦ Standard—Wright Mfg. Co., Lisbon, O.  
 Standardizing Co., New York, N. Y.  
 Star—Hunt-Helm-Ferris Co., Harvard, Ill.  
 Wensley Metal Products Co., Denver, Colo.  
 ♦ Wright Mfg. Co., Lisbon, Ohio.  
 ♦ Yale & Towne Mfg. Co., Stamford, Conn.

**TROUGHS, CHICKEN AND CHICK.**

Sanitary Company of America, Linfield, Pa.

**TROUGHS, GRINDSTONE, CAST IRON.**

Hoppen, J. E., & Sons, Belleville, N. J.

**TROUGHS AND TANKS, STOCK WATERING.**

Ajax—Chicago Granitine Mfg. Co., Chicago, Ill.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Scale Co., Kansas City, Mo.  
 Columbian Steel Tank Co., Kansas City, Mo.  
 Federal-Huber Co., Chicago, Ill.  
 Foltz, H. C., Hagerstown, Md.  
 Glenn Mfg. Co., St. Charles, Ill.  
 Kerrihard Co., The, Red Oak, Ia.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 Princess—Chicago Granitine Mfg. Co., Chicago, Ill.  
 Sanitary Company of America, Linfield, Pa.  
 Sheet Metal Products Co., Duluth, Minn.  
 Swett Iron Works, A. L., Medina, N. Y.  
 Whitacre-Goshert Mfg. Co., Rockford, Ill.

**TROWELS.**

♦ Atkins, E. C., & Co., Indianapolis, Ind.  
 Bishop, Geo. H., & Co., Lawrenceburg, Ind.  
 ♦ Disston, Henry, & Sons, Inc., Philadelphia, Pa.  
 Johnson, Wm., Newark, N. J.—(Painting and Plastering.)  
 Marshalltown—The Federal Gauge Co., Chicago, Ill.  
 ♦ Ohlen-Bishop Co., The, Columbus, O.  
 Sayre, L. A., Company, Newark, N. J.

**TRUCKS, ASSEMBLY.**

Zering Mfg. Co., H., The, Cincinnati, O.

**TRUCKS, BAGGAGE AND EXPRESS.**

Western Wheelbarrow Mfg. Co., S. Fort Smith, Ark.

**TRUCKS, BARREL, BAG AND KEG.**

Barnard & Leas Mfg. Co., Moline, Ill.  
 Barrett-Cravens Co., Chicago, Ill.  
 Bruhn's Ash Remover—The Bruhn Mfg. Co., Hobart, Ind.  
 Bryan Mfg. Co., Bryan, O.  
 Caledonia Bean Harvester Co., Caledonia, N. Y.  
 Clark, Geo. P. Co., Windsor Locks, Conn.  
 Clenzall—Clenzall Machine Co., St. Louis, Mo.  
 Eureka Mower Co., Utica, N. Y.  
 Keg-Konveyor—Kent Machine Co., Kent, Ohio.  
 Lewis-Shepard Co., Boston, Mass.  
 Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
 McKinney One-Man—McKinney Mfg. Co., Pittsburgh, Pa.  
 McMorran, Edw. E., & Co., Chicago, Ill.  
 Moore Self Loading—Moore Truck & Mfg. Co., Trenton, Mich., (for barrels, baskets, pails, carboys, etc.)  
 Ohio Mfg. Co., Painesville, O.  
 Pauly Jail Bldg. Co., Inc., St. Louis, Mo.  
 Sprout, Waldron & Co., Muncy, Pa.  
 Steel Truck Co., Howell, Mich.  
 Stephenson—C. H. Stephenson, Lynn, Mass.

**TRUCKS, BELTING, WITH REEL.**

♦ Graton & Knight Mfg. Co., Worcester, Mass.

**TRUCKS, BOX.**

Caledonia Bean Harvester Co., Caledonia, N. Y.  
 Clark, Geo. P. Co., Windsor Locks, Conn.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 Freeport Truck & Clamp Co., Freeport, Mich.  
 Howe Chain Company, Muskegon, Mich.  
 Lawson—Menasha Wood Split Pulley Co., Menasha, Wis. (fibre).  
 Loudon—Louden Machinery Co., Fairfield, Iowa.  
 McKinney One-Man—McKinney Mfg. Co., Pittsburgh, Pa.  
 Plimpton Elevating Truck Co., Stamford, Conn.  
 Standard Fibre Co., Somerville, Mass.  
 Steel Truck Co., Howell, Mich.  
 Yankee—Standard Scale & Supply Co., Pittsburgh, Pa.

**TRUCKS AND CARRIERS, RADIATOR.**

Buell's—Buell Bros., Fulton, N. Y. (truck and carrier combined).  
 Stearns—F. M. Stearns & Co., Jamestown, N. Y.

**TRUCKS AND CARR, ROLLING AND WIRE MILL.**

Morgan Construction Co., Worcester, Mass.

**TRUCKS, OVEN.**

American Foundry Equipment Co., New York, N. Y.  
 Plimpton Elevating Truck Co., Stamford, Conn.

**TRUCKS, DRY KILN.**

♦ A. B. C.—American Blower Co., Detroit, Mich.  
 Bayley Mfg. Co., Milwaukee, Wis.  
 Conco-Conkey, H. D., & Co., Mendota, Ill.  
 Everlasting—Gillette Roller Bearing Co., Grand Rapids, Mich.  
 Glascock Stove & Mfg. Co., Greensboro, N. C.

Grand Rapids Vapor Kiln Co., Grand Rapids, Mich.  
National Dry Kiln Co., Indianapolis, Ind.  
North Coast Dry Kiln Co., Seattle, Wash.  
Nutting—Nutting Truck Co., Faribault, Minn.

#### TRUCKS, FACTORY AND MILL.

A. C. Co.—Arnold-Creager Co., The, New London, Ohio.  
Adams Co., Dubuque, Ia.  
Aermotor Co., Chicago, Ill.  
American Clay Machinery Co., Bucyrus, O.  
Armstrong Improved—Armstrong Truck Co., North Wales, Pa.  
Barnard & Leas Mfg. Co., Moline, Ill.  
Barshal Company, Inc., The, Cleveland, O.  
Belcher & Taylor Agricultural Tool Co., Chicopee Falls, Mass.  
Bernstein Mfg. Co., Philadelphia, Pa.  
Blue Nose—Sharon Pressed Steel Co., Sharon, Pa.  
Buss Machine Works The, Holland, Mich.  
◆ Champion—Western Tool & Mfg. Co., Springfield, O.  
Chase Foundry & Mfg. Co., Columbus, O.  
Clark Co., Geo. P., Winsor Locks, Conn.  
Cleveland Wire Spring Co., The, Cleveland, O.  
Conco—H. D. Conkey & Co., Mendota, Ill.  
Cowan—Cowan Truck Co., Industrial Truck Co., Div., Holyoke, Mass. (Self-loading.)  
Dietz Co., The, Fred, Indianapolis, Ind.  
Electric—Electric Wheel Co., Quincy, Ill.  
Equipment Mfg. Co., Cleveland, O.  
Fairbanks-Morse Co., Chicago, Ill.  
Francis—Chas. E. Francis Co., Rushville, Ind.  
Freeport Truck & Clamp Co., Freeport, Mich.  
Gannett Handy Truck—Gannett Electrical Co., Providence, R. I.  
Gillette Roller Bearing Co., Grand Rapids, Mich.  
Glascok Stove & Mfg. Co., Greensboro, N. C.  
Globe Vise & Truck Co., Grand Rapids, Mich.  
Hercules Self-Loading—Noiseless Wheel & Truck Co., Philadelphia, Pa.  
Howe "Jack Tongue"—Howe Chain Co., Muskegon, Mich.  
Kessler Wheelbarrow Co., Philadelphia, Pa.  
Kilde & Co., New York, N. Y. (Merchandise and tools.)  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lansing Co., Lansing, Mich.  
Lawson—The Menasha Wood Split Pulley Co., Menasha, Wis.  
Le Roi Co., Milwaukee, Wis.  
Leigh's—Leigh Banana Case Co., Chicago, Ill.  
Louden—Louden Machinery Co., Fairfield, Iowa.  
Lyon—Lyon Metallic Mfg. Co., Aurora, Ill.  
McKinney One-Man—McKinney Mfg. Co., Pittsburg, Pa.  
Michigan Mfg. & Lumber Co., Holly, Mich.  
Morris & Co., Inc., Groveville, N. J.  
Morris Truck & Wheel Co., Inc., Philadelphia, Pa.  
New Britain Machine Co., New Britain, Conn.  
Nurdyke & Marmon Co., Indianapolis, Ind.  
Nutting—Nutting Truck Co., Faribault, Minn.  
Obermayer Co., The, Cincinnati, O.  
O'Brien, James H., Scale & Supply Co., New York.  
Ohio Gal. & Mfg. Co., Niles, Mich.  
Parker, S. E., Chicago, Ill.  
Phillips, Doup & Co., Inc., Brooklyn, N. Y.  
Plimptrucks—Plimpton Elevating Truck Co., Stamford, Conn.  
Push Easy—Parker, S. E., Chicago, Ill.  
Rogers Fibre Co., Boston, Mass.  
Southern Skein & Foundry Co., Chattanooga, Tenn.  
Standard Pressed Steel—Standard Scale & Supply Co., Pittsburgh, Pa.  
Star—Boston & Lockport Block Co., Boston, Mass.  
Steel Truck Co., Howell, Mich.  
Streich, A. & Bro. Co., Oshkosh, Wis.  
Syracuse Chilled Plow Co., Syracuse, N. Y.  
Towsley—John T. Towsley Mfg. Co., Cincinnati, O.  
◆ Transmission Ball Bearing Co., Inc., Buffalo, N. Y.  
Tucker & Dorsey Mfg. Co., Indianapolis, Ind.  
Union Engineering Co., Cleveland, O. (varnish trucks).  
Weiner Machine Works Co., Lebanon, Pa.  
West Chester—West Chester Engine Co., West Chester, Pa.  
Western Wheelbarrow Mfg. Co., So. Ft. Smith, Ark.  
Whitman Agricultural Co., St. Louis, Mo.  
Yankee—Standard Scale & Supply Co., Pittsburgh, Pa.  
Zering Mfg. Co., H., Cincinnati, O.

#### TRUCKS, FACTORY, FOR MOVING IRON, STEEL, PIPE, ETC.

◆ Champion—Western Tool & Mfg. Co., Springfield, O.  
Howe Chain Company, Muskegon, Mich.  
Zering Mfg. Co., H., The, Cincinnati, O.

#### TRUCKS, FACTORY, TRANSFER OR ELEVATING.

Atlas Crane Truck—Atlas Car & Mfg. Co., Cleveland, O.  
Barrett Lift Truck—Barrett-Cravens Co., Chicago.  
◆ Champion—Western Tool & Mfg. Co., Springfield, O.  
Chapman Truck Co., Chicopee Falls, Mass.  
Chase Foundry & Mfg. Co., Columbus, O.  
Clark—The Geo. P. Clark Co., Windsor Locks, Conn.  
Columbus Lift Truck Co., Columbus, O.  
Cowan Transveyors—Cowan Truck Co., Industrial Truck Co. Div., Holyoke, Mass.

Howe Chain Company, Muskegon, Mich.  
Jacklift—Lewis-Shepard Co., Boston, Mass.  
Mercury Mfg. Co., Chicago, Ill.  
National-Chapman—National Scale Co., Chicopee Falls, Mass.  
O'Brien, James H., Scale & Supply Co., New York, N. Y.  
Parks Ball Bearing Machine Co., Cincinnati, O.  
Patterson-Kelley Co., The, New York, N. Y.  
Peck Hamre Mfg. Co., Berlin, Wis.  
Plimpton—Plimpton Transfer Truck Co., Stamford, Conn.  
Stuebing—The Stuebing Truck Co., Cincinnati, O.  
Stur-di-Trucks—The Sturdi-Truck Mfg. Co., Inc., Holyoke, Mass.  
◆ Universal—The Transmission Ball Bearing Co., Buffalo, N. Y.  
◆ Western Tool & Mfg. Co., Springfield, O.

#### TRUCKS AND TRACTORS, FACTORY, ELECTRIC.

Automatic Transportation Co., The, Buffalo, N. Y.  
Baker, Raulang—The R. & L. Baker Co., Cleveland, Ohio.  
Barrett-Cravens Co., Chicago, Ill.  
Buda—The Buda Co., Chicago, Ill.  
Crescent Truck Co., Elizabeth, N. J.  
Elwell-Parker, Self-Loading—Elwell-Parker Electric Co., The, Cleveland, Ohio.  
I. T. C.—Cowan Truck Co., Holyoke, Mass.  
Lakewood—Lakewood Engineering Co., Cleveland, Ohio.  
Lansing Co., Lansing, Mich.  
Onelda—Onelda Motor Truck Co., Green Bay, Wis.  
Twin City—Twin City Co., Minneapolis, Minn.  
Yale—Yale & Towne Mfg. Co., Stamford, Conn.

#### TRUCKS AND TRACTORS, FACTORY, GASOLINE ENGINE.

Avery Company, Peoria, Ill.  
Bowerox—Barrett-Cravens Co., Chicago, Ill.  
Empire Mfg. Co., Quincy, Ill.  
Gallon—Gallon Dynamic Motor Truck Co., Gallon, O.  
Karry-Lode—Karry-Lode Industrial Truck Co., Inc., Long Island City, N. Y.  
Kaysee—The Kaysee Co., Chicago, Ill.  
Koppel Industrial Car & Equipment Co., Koppel, Pa.  
Lammert & Mann Co., Chicago, Ill.  
Lansing Co., Lansing, Mich.  
Merchant & Evans Co., Philadelphia, Pa.  
Onelda—Onelda Motor Truck Co., Green Bay, Wis.  
Standard Scale & Supply Co., Pittsburgh, Pa.  
Towsley—John T. Towsley Mfg. Co., Cincinnati, O.

#### TRUCKS FOR MOUNTING GAS ENGINES.

American Scale Co., Kansas City, Mo.  
Nelson Bros. Co., Saginaw, Mich.

#### TRUCKS, HOOK AND LADDER.

Hayward & Co., S. F., New York, N. Y.  
Howe-Buckeye—American Fire Apparatus Co., New York.  
Pirsch, Peter & Sons Co., Kenosha, Wis.  
Wirt & Knox Mfg. Co., Philadelphia, Pa.

#### TRUCKS, LADLE, FOUNDRY.

Teetor, R. J. Co., Muskegon, Mich.

#### TRUCKS, LOG.

American—American Saw Mill Mach'y Co., Hackettstown, N. J.  
Electric—Electric Wheel Co., Quincy, Ill.  
Empire—Empire Mfg. Co., Quincy, Ill.  
Oshkosh Logging Tool Co., Oshkosh, Wis.  
Parker, S. E., Chicago, Ill.  
Plimpton Elevating Truck Co., Stamford, Conn.  
Standard Saw Mill Machinery Co., Erie, Pa.  
Streich, A. & Bro. Co., Oshkosh, Wis.

#### TRUCKS AND BUGGIES, LUMBER.

American—American Saw Mill Mach'y Co., Hackettstown, N. J.  
Archer Iron Works, Chicago, Ill.  
Cleveland Machinery & Sup. Co., Cleveland, O.  
Electric—Electric Wheel Co., Quincy, Ill.  
Empire—Empire Mfg. Co., Quincy, Ill.  
Francis—Francis Co., Chas. E., Rushville, Ind.  
Glascok Stove & Mfg. Co., Greensboro, N. C.  
Huntsville Foundry & Machine Works, Huntsville, Ala.  
Oshkosh Logging Tool Co., Oshkosh, Wis.  
Overpack, S. C., Manistee, Mich.  
Plimpton Elevating Truck Co., Stamford, Conn.  
Sanford-Day Iron Works, Knoxville, Tenn.  
Standard Scale & Supply Co., Pittsburgh, Pa. (dollies and rollers.)  
Standard Saw Mill Mach'y Co., Erie, Pa.  
Streich, A. & Bro., Oshkosh, Wis.  
Towsley, John T., Mfg. Co., Cincinnati, O.

#### TRUCKS, MINE CAR, ROLLER BEARING.

Fairmont—Fairmont Mining Machinery Co., Fairmont, W. Va.  
Lincoln Steel Forge Co., St. Louis, Mo.

Ottumwa Iron Works, Ottumwa, Iowa.  
Plimpton Elevating Truck Co., Stamford, Conn.

#### TRUCKS, PIG IRON.

Biehl Iron Works, Inc., Reading, Pa.  
Central Foundry Supply Co., Columbus, O.  
Phillips-Doup Co., Inc., Brooklyn, N. Y.

#### TRUCKS, RAILWAY, FOR HANDLING CAR JACKS, COUPLERS, AXLES, ETC.

Edmonds, One Man Truck—W. H. Putnam, Madison, Wis.

#### TRUCKS, SCOOP.

Climax—Detroit Scoop-Truck Co., Detroit, Mich.  
Sackett, H. B., Screen & Chute Co., Chicago, Ill.

#### TRUCKS, STEEL BOX.

Fairbanks, Morse & Co., Chicago, Ill.  
Howe Chain Co., Muskegon, Mich.  
Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Terrell's—Terrell's Equipment Co., Grand Rapids, Mich.

#### TUBES, BLASTING.

Cressman, H. C. Co., Philadelphia, Pa.

#### TUBES, BOILER.

Andrews Steel Co., The, Newport, Ky.  
Best Co., Pittsburgh, Pa.  
Boiler Tube Company of America, Pittsburgh, Pa.  
Chicago Tube & Iron Co., Chicago, Ill.  
Colonial Supply Co., Pittsburgh, Pa.  
Cressman, H. C. Co., Philadelphia, Pa.  
Delaware Steel Co., New York.  
Detroit—Detroit Seamless Steel Tubes Co., Detroit.  
Etna—Spang, Chalfant & Co., Pittsburgh, Pa.  
Globe Seamless Steel Tubes Co., Milwaukee, Wis.  
Giberson, E. D. & Co., Inc., New York.  
Mark—Mark Mfg. Co., Chicago, Ill.  
M—Monongahela Tube Co., Pittsburgh, Pa.  
Munroe & Sons Mfg. Corp., R., Pittsburgh, Pa.  
National, Shelby—National Tube Co., Pittsburgh, Pa.  
New York Central Iron Works Co., Inc., Hagers-town, Md.  
P. I. Co.—Parkesburg Iron Co., Parkesburg, Pa. (charcoal iron).  
Pittsburgh Steel Products Co., Pittsburgh, Pa.  
Randolph-Clowes Co., The, Waterbury, Conn. (brass and copper).  
Reading—Reading Iron Co., Reading, Pa.  
Reliance—Allegheny Steel Co., Pittsburgh, Pa.  
Ryerson, Joseph T. & Son, Chicago, Ill.  
South Chester Tube Co., Chester, Pa.  
Worth Bros. Co., Philadelphia, Pa.

#### TUBES, BOILER ARCH.

Chicago Tube & Iron Co., Chicago, Ill.  
Standard Seamless Tubes Co., Ambridge, Pa.

#### TUBES, BOILER, LOCOMOTIVE.

Chicago Tube & Iron Co., Chicago, Ill.  
Detroit—Detroit Seamless Steel Tubes Co., Detroit, Mich.  
National—National Tube Co., Pittsburgh, Pa.  
Standard Seamless Tubes Co., Ambridge, Pa.

#### TUBES, BRASS, SPECIAL BENT TO ORDER.

New Jersey Tube Co., New York, N. Y.  
Standard Brass Mfg. Co., Utica, N. Y.  
United Wire & Supply Co., Providence, R. I.

#### TUBES, CAST IRON, FUEL ECONOMIZER.

Warren Foundry & Machine Co., New York.

#### TUBES, CONDENSER.

Ambrac—The American Brass Co., Waterbury, Conn.  
Crescent—The Wheeler Condenser & Engineering Co., Carteret, N. J.  
Eagle Smelting & Refining Works, New York.  
North American Copper Co., New York, N. Y.  
Shonberg I., Inc., Brooklyn, N. Y.  
Scovill Mfg. Co., Waterbury, Conn.

#### TUBES, ROSE MENDER.

♦ Sherman Mfg. Co., H. B., Battle Creek, Mich.  
Wolverine Brass Works, Grand Rapids, Mich.

#### TUBES, INNER.

Best Test—Union Rubber & Asbestos Co., Trenton, N. J.

#### TUBES, METAL, COLLAPSIBLE.

Consolidated Fruit Jar Co., New Brunswick, N. J.  
National Can Co., Detroit, Mich.  
Raymond Lead Co., Chicago, Ill.  
Standard Specialty & Tube Co., New Brighton, Pa.  
Victor—United American Metals Corp., Brooklyn, N. Y.

Western Aluminum Co., Chicago, Ill.  
Wheeling Stamping Co., Wheeling, W. Va.

#### TUBES OR SPOUTS, PANTRY AND BASIN COCK.

American Pin Co., Waterbury, Conn.  
Glauber Brass Mfg. Co., Cleveland, O.  
Standard Brass Mfg. Co., Utica, N. Y.  
Waterbury Mfg. Co., Waterbury, Conn.

#### TUBES AND SHEATHS, PYROMETER PROTECTION.

Carborundum—The Carborundum Co., Niagara Falls, N. Y.  
Pyrolite, Usalite—The Stupakoff Laboratories, Pittsburgh, Pa.

#### TUBES, RANGE BOILER, CIRCULATING.

Gerard—Gerard Mfg. Co., Dickson City, Pa.

#### TUBES, SUPERHEATER.

Chicago Tube & Iron Co., Chicago, Ill.  
Detroit Seamless Steel Tubes Co., Detroit, Mich.  
National—National Tube Co., Pittsburgh, Pa.  
Pittsburgh Steel Products Co., Pittsburgh, Pa.

#### TUBING, ALLISON VANISHING THREAD.

National—National Tube Co., Pittsburgh, Pa.

#### TUBING, ALUMINUM.

Aluminum Co. of America, Pittsburgh, Pa.  
Ivins Tube Works, Ellwood, Philadelphia, Pa.  
Rome Hollow Wire & Tube Co., Rome, N. Y.  
Summerill Tubing Co., Bridgeport, Pa.

#### TUBING, ALLOY STEEL, SEAMLESS.

The Ohio Seamless Tube Co., Shelby, O.

#### TUBING, ASBESTOS.

Bramco—Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
Dominion Asbestos and Rubber Corp., New York.  
Kern Commercial Co., New York, N. Y.  
Perfection Tire & Rubber Co., Wabash, Ind.  
Usaco—United States Asbestos Co., Mannheim, Pa.

#### TUBING, BOILER.

National & Shelby—National Tube Co., Pittsburgh, Pa.

#### TUBING, BRASS AND BRONZE.

Alston's—American Tube Works, Boston, Mass.  
Ambrac—American Brass Co., The, Waterbury, Conn.  
American Brass & Copper Co., The, New York, N. Y.  
Baltimore Tube Co., Baltimore, Md.  
Brey & Krause Mfg. Co., Allentown, Pa. (nickel).  
Bridgeport Brass Co., Bridgeport, Conn.  
Bristol Brass Co., Bristol, Conn.  
Buffalo Tubing Co., Erie, Pa.  
Dallas Brass & Copper Co., Chicago, Ill.  
Delaware Steel Co., New York, N. Y.  
Detroit Copper & Brass Rolling Mills, Detroit, Mich.  
Erie-Buffalo Tube Co., Erie, Pa.  
Farries Mfg. Co., Decatur, Ill.  
Flawless—The National Copper & Smelting Co., Cleveland, O.  
French Mfg. Co., Waterbury, Conn. (small sizes).  
Green's—American Tube Works, Boston, Mass.  
Ivins Tube Works, Ellwood, Philadelphia, Pa.  
McKinzie—Walton Mfg. Co., Pawtucket, R. I. (small).  
Motor Products Corp., Detroit, Mich.  
National Conduit & Cable Co., Inc., Hastings-on-Hudson, N. Y.  
New Jersey Tube Co., New York, N. Y.  
Phenix Tube Co., Warren, Ohio (iron lined).  
Randolph-Clowes Co., The, Waterbury, Conn.  
Roberts Tube Works, Detroit, Mich.  
Rome Brass & Copper Co., Rome, N. Y.  
Rome Hollow Wire & Tube Co., Rome, N. Y.  
Rome Mfg. Co., Rome, N. Y.  
Sandoval Zinc Co., Chicago, Ill.  
Sandusky Foundry & Machine Co., Sandusky, O.  
Scoville Mfg. Co., Waterbury, Conn.  
Seymour Mfg. Co., The, Seymour, Conn.  
Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
Summerill Tubing Co., Bridgeport, Pa.  
United Wire & Supply Co., Providence, R. I.  
Waterbury Mfg. Co., Waterbury, Conn.  
Wells & Co., A. H., Waterbury, Conn. (small).  
Wheeler Condenser & Engineering Co., Carteret, N. J.  
Wolverine—Michigan Copper & Brass Co., The, Detroit, Mich.

#### TUBING, COLD DRAWN.

Globe Seamless Steel Tubes Co., Milwaukee, Wis.  
Shelby—National Tube Co., Pittsburgh, Pa.  
Standard Seamless Tube Co., Ambridge, Pa.

#### TUBING, COPPER.

Adam's—American Tube Works, Boston, Mass.

American Brass Co., The, Waterbury, Conn.  
 American Brass & Copper Co., The, New York, N. Y.  
 Baltimore Tube Co., Baltimore, Md.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Chase Rolling Mill Co., Waterbury, Conn.  
 Detroit Copper & Brass Rolling Mills, Detroit, Mich.  
 French Mfg. Co., Waterbury, Conn. (small sizes).  
 Ivins Tube Works, Ellwood, Philadelphia, Pa.  
 McKinnis-Walton Mfg. Co., Pawtucket, R. I. (small).  
 Motor Products Corp., Detroit, Mich.  
 National Conduit & Cable Co., Inc., Hastings-on-Hudson, N. Y.  
 New Jersey Tube Co., New York, N. Y.  
 North American Copper Co., New York, N. Y.  
 Ohio Brass & Copper Co., The, Cincinnati, O.  
 Randolph-Clowes Co., Waterbury, Conn.  
 Roberts Tube Works, Detroit, Mich.  
 Rome Brass & Copper Co., Rome, N. Y.  
 Rome Hollow Wire & Tube Co., Rome, N. Y.  
 Rome Mfg. Co., Rome, N. Y.  
 Sandoval Zinc Co., Chicago, Ill.  
 Scovill Mfg. Co., Waterbury, Conn.  
 Seymour Mfg. Co., The, Seymour, Conn.  
 Standard—Standard Seamless Tube Co., Ambridge, Pa.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Summerhill Tubing Co., Bridgeport, Pa.  
 United Wire & Supply Co., Providence, R. I.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Wells Co., A. H., Waterbury, Conn.

#### TUBING, ELECTRIC, COTTON.

Empire Mfg. Co., The, Lockport, N. Y.  
 ♦ Senate—Chas. Niedner's Sons Co., Inc., Malden, Mass.

#### TUBING, FIBRE. (See "Fibre, Hard.")

#### TUBING, FLUX JOINT.

National—National Tube Co., Pittsburgh, Pa.  
 United Metal Hose Co., Inc., New York, N. Y.  
 Wheelock Mfg. Co., Wheelock, Vt. (flexible cutting lubricant tube).  
 Whitman Metal Goods Co., Whitman, Mass.

#### TUBING OR HOSE, FLEXIBLE, METALLIC.

Almond—Almond Company, Ashburnham, Mass.  
 Ametalhose—American Metal Hose Co., Waterbury, Conn.  
 Atlantic Metal Hose Co., New York, N. Y.  
 Baltimore Tube Co., Baltimore, Md.  
 Breeze Mfg. Co., Newark, N. J.  
 Chicago Tubing & Braiding Co., Chicago, Ill.  
 Danubii—Danubii Co., The, New York, N. Y.  
 Federal Metal Hose Corp., Buffalo, N. Y.  
 Interlocking—Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.  
 Kantkink—Goodyear Tire & Rubber Co., Akron, O.  
 Livermore, Homer F., Inc., Boston, Mass.  
 Mulconroy—Mulconroy Co., Inc., Philadelphia, Pa.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Rebels, L. J., New York.  
 Rex-Tube—Chicago Tubing & Braiding Co., Chicago.  
 Reflex—United Metal Hose Co., New York, N. Y.  
 Titeflex Metal Hose Corp., Newark, N. J.  
 U. S. Flexible Metallic Tubing Co., Los Angeles, Cal.  
 United Metal Hose Co., Inc., New York, N. Y.  
 Wheelock Mfg. Co., Wheelock, Vt. (flexible cutting lubricant tube).  
 Whitman Metal Goods Co., Whitman, Mass.

#### TUBING, GAS LAMP AND STOVE.

Ametalhose—American Metal Hose Co., Waterbury, Conn.  
 Anchor—Chicago Tubing & Braiding Co., Chicago, Ill.  
 Kantleke—Chicago Tubing & Braiding Co., Chicago, Ill.  
 Kant Brake—Chicago Tubing & Braiding Co., Chicago, Ill.  
 Liberty Mfg. Co., The, East Norwalk, Conn.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 New York Gas Tubing Co., New York, N. Y.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Pen Flex—Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.  
 Rex—Chicago Tubing & Braiding Co., Chicago, Ill.  
 Star—Chicago Tubing & Braiding Co., Chicago, Ill.  
 Titeflex Metal Hose Corp., Newark, N. J.  
 Vulcan—Wm. M. Crane Co., New York, N. Y.

#### TUBING, GASKET.

(See also "Gaskets, Tubular.")

Albanoid—Thermoid Rubber Co., Trenton, N. J.  
 Apex—W. H. Salisbury & Co., Inc., Chicago, Ill.  
 Blackoid—Thermoid Rubber Co., Trenton, N. J.  
 Consolidated Rubber Co., Trenton, N. J.  
 ♦ Delta—General Asbestos & Rubber Co., Charleston, S. C.  
 Dominion—Dominion Asbestos and Rubber Corp., New York.

Dualoid—Thermoid Rubber Co., Trenton, N. J.  
 Excelsior—Boston Belting Corp., Boston, Mass.  
 Flangetite—Dominion Asbestos and Rubber Corp., New York, N. Y.  
 ♦ Ideal—General Asbestos & Rubber Co., Charleston, S. C.  
 ♦ Jenkins—Jenkins Bros., New York, N. Y.  
 Metal-Asbestos—A. W. Chesterton Co., Boston, Mass.  
 Rubberbestos—A. W. Chesterton Co., Boston, Mass.  
 Thoroid—Thermoid Rubber Co., Trenton, N. J.

#### TUBING, LEAD, SMALL SIZES.

(See also "Pipe, Lead.")

Stromi—Standard Rolling Mills, Inc., Brooklyn, N. Y.  
 Union Smelting & Refining Co., Inc., Newark, N. J.

#### TUBING, NICKEL AND SILVER.

American Brass Co., The, Waterbury, Conn.  
 Mohegan Tube Co., Brooklyn, N. Y.  
 Summerhill Tubing Co., Bridgeport, Pa.  
 United Wire & Supply Co., Providence, R. I.

#### TUBING, MECHANICAL.

American Tube Co., Chicago, Ill.  
 Mohegan Tube Co., Brooklyn, N. Y.  
 Shelby—National Tube Co., Pittsburgh, Pa.

#### TUBING, ODD SHAPED.

National-Shelby—National Tube Co., Pittsburgh, Pa.

#### TUBING, ORGAN.

Juno—Chas. Millar & Son Co., Utica, N. Y.

#### TUBING, OIL WELL.

National and Shelby—National Tube Co., Pittsburgh, Pa.  
 Reading Iron Co., Reading, Pa.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 ♦ Youngstown—Youngstown Sheet & Tube Co., Youngstown, O.

#### TUBING, PNEUMATIC.

American Tube Works, Boston, Mass.  
 Philadelphia Pipe Bending Co., The, Philadelphia, Pa.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Whitlock Coil Pipe Co., Hartford, Conn.

#### TUBING, RUBBER.

Atlantic Tubing Co., Providence, R. I.  
 ♦ Black Seal, White Cross—Home Rubber Co., Trenton, N. J.  
 Boston Belting Co., Boston, Mass.  
 Boston Woven Hose & Rubber Co., Cambridge, Mass.  
 The H. O. Canfield Co., Bridgeport, Conn.  
 ♦ Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
 Clermont—Hudson Mechanical Rubber Co., New York, N. Y.  
 Diamond Rubber Co., Inc., The, Akron, O.  
 Dominion—Dominion Asbestos and Rubber Corp., New York.  
 Double Service—Double Service Packing Co., Philadelphia, Pa.  
 Empire Rubber & Tire Co., Trenton, N. J.  
 Essex Rubber Co., Inc., Trenton, N. J.  
 Girard-Wise & Bailey, Philadelphia, Pa.  
 ♦ Globe—United & Globe Rubber Co., Trenton, N. J.  
 ♦ Goodrich, B. F., Rubber Co., The, Akron, O.  
 Gutta Percha & Rubber Mfg. Co., New York, N. Y.  
 Hi-Test—Hudson Mechanical Rubber Co., New York, N. Y.  
 Hodgman Rubber Co., Tuckahoe, N. Y.  
 Hudson—Hudson Mechanical Rubber Co., New York, N. Y.  
 Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
 Kansas City Rubber & Belting Co., Kansas City, Mo.  
 Mulconroy Co., Inc., Philadelphia, Pa.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 Norwalk Mfg. Co., East Norwalk, Conn.  
 Pennsylvania Rubber Co., The, Jeannette, Pa.  
 Pioneer Rubber Mills, San Francisco, Calif.  
 Quaker City Rubber Co., Philadelphia, Pa.  
 Regent—Dominion Asbestos and Rubber Corp., New York.  
 Schacht Rubber Mfg. Co., Huntington, Ind.  
 Sovereign—Dominion Asbestos and Rubber Corp., New York.  
 Star—Star Rubber Co., Akron, O.  
 ♦ Superheat—Goodrich Rubber Co., B. F., Akron, O.  
 Tribune—Continental Rubber Works, Erie, Pa.  
 Union Rubber & Asbestos Co., Trenton, N. J.  
 ♦ United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
 ♦ United & Globe Rubber Mfg. Co., Trenton, N. J.  
 Watts—John M. Watts Sons, Philadelphia, Pa.  
 Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**TUBING, SEAMLESS STEEL.**

Bordentown Steel & Tube Corp., Bordentown, N. Y.  
 Fleck Bros. Co., Philadelphia, Pa.  
 Hungerford, U. T., Brass & Copper Co., New York, N. Y.  
 Mohegan Tube Co., Brooklyn, N. Y.  
 Ohio Seamless Tube Co., Shelby, O.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Timken Roller Bearing Co., Canton, O.

**TUBING, STEEL.**

American Tube Co., Chicago, Ill.  
 Bordentown Steel & Tube Corp., Bordentown, N. J.  
 Cressman, W. C., Co., Philadelphia, Pa.  
 Delaware Seamless Steel Tube Co., Reading, Pa.  
 Delaware Steel Co., New York, N. Y.  
 Detroit Seamless Steel Tube Co., Detroit, Mich.  
 Ellsco—Elyria Iron & Steel Co., Cleveland, O.  
 Ellwood Tube Works, Ivins, (Oak Lane), Philadelphia, Pa.  
 Elyria Iron & Steel Co., Cleveland, O.  
 Giberson, E. D., & Co., Inc., New York.  
 Globe Seamless Steel Tube Co., Detroit, Mich.  
 High Grade—American Steel Tube Co., The, Toledo, O.  
 Mohegan Tube Co., The, Brooklyn, N. Y.  
 Motor Products Corp., Detroit, Mich.  
 Ohio Seamless Steel Tube Co., Milwaukee, Wis.  
 Phenix Tube Co., Warren, O.  
 Pittsburgh Seamless Tube Co., Pittsburgh, Pa.  
 Pittsburgh Steel Products Co., Pittsburgh, Pa.  
 Richards, Benjamin Co., The, Winsted, Conn.  
 Shelby—National Tube Co., Pittsburgh, Pa.  
 Shelby Steel Tube Co., Ellwood City, Pa.  
 Standard Steel Tube Co., Toledo, O.  
 Stanweld—Standard Welding Co., Cleveland, O.  
 Summerill Tubing Co., Philadelphia, Pa.  
 Toledo Steel Tube Co., Toledo, O.

**TUBING STEEL, LOCK SEAM.**

Dallas Brass & Copper Co., Chicago, Ill.

**TUBING, VACUUM CLEANER.**

Chicago Tubing & Braiding Co., Chicago, Ill.  
 Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.

**TUBING, WHITE METAL.**

Benedict Nickel—American Brass Co., Waterbury, Conn.

**TUBING, WOODEN.**

Estes, E. B., & Sons, New York, N. Y.  
 Wyckoff, A., & Son Co., Elmira, N. Y.

**TUBING, ZINC.**

Dallas Brass & Copper Co., Chicago, Ill.

**TUBE, COAL.**

Blehl Iron Works, Inc., The, Reading, Pa.  
 National—Phillips, Doup & Co., Inc., Brooklyn, N. Y.

**TUNGSTEN, CONCENTRATES.**

Wah Chang Mining & Smelting Co., Ltd., New York.

**TURBINE ENGINES, STEAM.**

Alberger Pump & Condenser Co., New York, N. Y.  
 Allis-Chalmers Co., Milwaukee, Wis.  
 Ball-Cooley Engineering Co., New York, N. Y.  
 Buffalo Spiro—Buffalo Forge Co., Buffalo, N. Y.  
 Corling Turbine Blower Co., Worcester, Mass. (Small sizes.)  
 Clipper—Rhodes Mfg. Co., Hartford, Conn.  
 Connecticut Turbine Mfg. Co., New London, Conn.  
 De Laval—De Laval Steam Turbine Co., Trenton, N. J.  
 General Electric Co., Schenectady, N. Y.  
 Hackenberg—Hackenberg Turbine Co., The, Flushing, N. Y.  
 Kerr Turbine Co., Wellsville, N. Y.  
 Midwest Engine Co., Indianapolis, Ind.  
 Moore Steam Turbine Corp., Wellsville, N. Y.  
 Morris Co., I. P., Philadelphia, Pa.  
 Platt—The Platt Iron Works Co., Dayton, O.  
 Power Turbo Blower Co., New York, N. Y. (small).  
 Rateau-Smoot—Southwark Foundry & Machine Co., Philadelphia, Pa.  
 Ridgeway—Rateau—Ridgeway Dynamo & Engine Co., Ridgeway, Pa.  
 Soule Steam Feed Works, Meriden, Miss.  
 Steam Motor—Steam Motors Co., The, Springfield, Mass.  
 Sturtevant, B. F., Co., Hyde Park, Mass.  
 Terry—Terry Steam Turbine Co., Hartford, Conn.  
 Westinghouse—Westinghouse Machine Co., The, East Pittsburgh, Pa.  
 Wing—L. J. Wing Mfg. Co., New York, N. Y.

**TURBINE WHEELS, WATER.**

(See also "Wheels, Water.")

Ajax—Salem Foundry & Machine Works, Salem, Va.

Allis-Chalmers Co., Milwaukee, Wis.  
 Bradway, C. P., Machine Works, West Stafford, Conn.  
 Burnham, I. X. L.—Fitz Water Wheel Co., Hanover, Pa.  
 Burnham—Norrish, Burnham & Co., Glen Rock, Pa.  
 Chase Turbine Co., Orange, Mass.  
 Christiansa Machine Co., Christiansa, Pa.  
 Coppus Engineering Co., Worcester, Mass.  
 Davis Foundry & Machine Works, Rome, Ga.  
 De Lorch Mill Mfg. Co., Bridgeport, Ala.  
 Doble Co., Abner, San Francisco, Cal.  
 Dow, L. B., Inc., Keene, N. H.  
 Hunt, Rodney, Machine Co., Orange, Mass.  
 Morris Co., I. P., Philadelphia, Pa.  
 Munson Mill Machinery Co., Inc., Utica, N. Y.  
 New American—The Dayton-Globe Iron Works Co., Dayton, O.  
 Pelton—Harrisburg Mfg. & Boiler Co., Harrisburg, Pa.  
 Samsen—The James Leftel & Co., Springfield, O.  
 Smith—S. Morgan Smith Co., York, Pa.  
 Trump—Trump Mfg. Co., Springfield, O.  
 Victor-Francis—The Platt Iron Works Co., Dayton, O.  
 Wellman-Sever-Morgan Co., Cleveland, O.  
 Wolf Co., The, Chambersburg, Pa.

**TURNBOLTS.**

Sepco—Star Expansion Bolt Co., New York, N. Y.

**TURNBUCKLES.**

◆ Bethlehem Steel Co., Bethlehem, Pa.  
 Bourne-Fuller Co., Cleveland, O.  
 Brazil—Republic Iron & Steel Co., Pittsburgh, Pa.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Hallett Iron Works, The, Harvey, Ill.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Laughlin, Thomas, Co., The, Portland, Me.  
 Macomber & Whyte Rope Co., Kenosha, Wis.  
 Marine Hardware Equipment Co., S. Portland, Me.  
 Merrill Bros., Maspeth, New York, N. Y.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 Mockee, C. M., Co., Cincinnati, O.  
 Modern Mfg. Co., Cleveland, Ohio.  
 Moran Bolt & Nut Mfg. Co., St. Louis, Mo.  
 National Supply Co., The, Baltimore, Md.  
 Newhall Chain Forge & Iron Co., New York.  
 Norris, W. C., Tulsa, Okla.  
 O'Leary, Arthur J., Son Co., Chicago, Ill.  
 ◆ Republic Iron & Steel Co., Youngstown, O.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 U. W.—The Upson-Walton Co., Cleveland, O.  
 Welch, T. F., & Co., Boston, Mass. (brass).  
 Western Automatic Machine Screw Co., The, Elyria, O.  
 Wilcox, Crittenden & Co., Inc., Middletown, Conn.  
 J. R. Wood Supply Co., Cincinnati, O.

**TURNERS, LOGS, FOR SAW MILLS.**

Hill-Curtis Co., Kalamazoo, Mich.  
 Standard Iron Works, Sherman, N. Y.

**TURNABLES, AUTOMOBILE AND INDUSTRIAL RAILWAY.**

A. C. Co.—Arnold-Creager Co., The, New London, Ohio.  
 Beach, T. C., Auto Turntable Co., Inc., New York.  
 Brown Hoisting Machinery Co., The, Cleveland, O.  
 Cambridge Iron Works, Cambridge, Mass.  
 Canton Foundry & Machine Co., Canton, Ohio.  
 Chase Foundry & Mfg. Co., Columbus, O.  
 ◆ Chisholm-Moore Mfg. Co., Cleveland, O.  
 Ernst—Chas. K. Ernst Co., Buffalo, N. Y.  
 Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
 Koppel Industrial Car & Equipment Co., Koppel, Pa.  
 Link-Belt Company, Chicago and Philadelphia.  
 Northern Engineering Wks., Detroit, Mich.  
 Orenstein-Arthur Koppel Co., Koppel, Pa.  
 Pulaski Foundry & Machine Co., Pulaski, Va.  
 Roeper Overhead—Roeper Crane & Hoist Works, Reading, Pa.  
 R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Sackett, H. E., Screen & Chute Co., Chicago, Ill.  
 Universal—Canton Foundry & Machine Co., The, Canton, O.  
 Washburn & Granger, New York, N. Y.

**TURPENTINE, SUBSTITUTE.**

Acme—Acme Refining Co., The, Cleveland, Ohio.  
 Cincinnati Oil Works Co., Cincinnati, O.  
 Bayerson Oil Works, Erie, Pa.  
 Durco—Duryea Mfg. Co., Bayonne, N. J.  
 Hercules Powder Co., Wilmington, Del.  
 Sero Specialty Co., Cleveland, O.  
 World Refining Co., The, Easton, Pa.

**TUYERES, COOLERS AND PLATES, FOR BLAST FURNACES.**

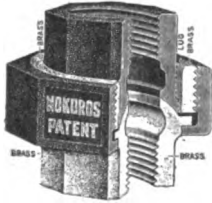
Lawrenceville Bronze Co., Pittsburgh, Pa.

**TURNABLES, OVERHEAD.**

R-W—Richards-Wilcox Mfg. Co., Aurora, Ill.  
 Roeper—Roeper Crane & Hoist Works, Reading, Pa.

# The NOKOROS Patent Union

## No Gasket Required—Air Tested



A Union made absolutely Non-Corrosive at all contact points. Non-Corrosive Brass to Iron thread connection. Non-Corrosive Brass to Iron seat between ring and tail piece.

Made Only by

ILLINOIS MALLEABLE IRON CO.,

1801-25 Diversey Parkway, CHICAGO

### TWINE, BINDER.

Columbian—Columbian Rope Co., Auburn, N. Y.  
Rakco—R. A. Kelly Co., Xenia, O.  
Star—Hooven & Allison Co., Xenia, Ohio.

### TWINE, COTTON, JUTE, FLAX AND HEMP.

American Mfg. Co., The, New York, N. Y.  
American Mills Co., Atlanta, Ga.  
Chelsea Fibre Mills, New York.  
Columbian and Regal—Columbian Rope Co., Auburn, N. Y.  
Estes Mills, Fall River, Mass.  
Hanover Cordage Co., Hanover, Pa.  
Hooven & Allison Co., The, Xenia, O.  
New York Cordage Co., New York, N. Y.  
St. Louis Cordage Mills, St. Louis, Mo.  
Waterbury Co., New York, N. Y.  
Whitlock Cordage Co., New York (hemp, sisal, news-paper).  
Winne & Son, Frank W., Philadelphia, Pa.

### TWINE, SEWING.

Asbestos—American Asbestos Co., Norristown, Pa.

### UNIONS, AIR PUMP.

Dart Mfg. Co., E. M., Providence, R. I.  
♦ Jefferson Union Co., Lexington, Mass.  
Kewanee—Walworth Mfg. Co., Boston, Mass.

### UNIONS, BALL JOINT.

(See also, "Joints, Pipe, Flexible.")

Excell—Providence Fittings Co., Boston, Mass.  
♦ Jefferson Union Co., Lexington, Mass.  
Kelly & Jones Co., The, Greensburg, Pa.  
Kewanee—Walworth Mfg. Co., Boston, Mass.

### UNIONS, BLAST FURNACE.

Pittsburg Brass Mfg. Co., Pittsburg, Pa.

### UNIONS, BRASS.

Acheson Mfg. Co., Rankin, Pa.  
American Brass & Copper Co., The, New York, N. Y.  
Atkinson Co., The, Rochester, N. Y.  
Buckeye Iron & Brass Works, Dayton, O.  
Burlington Brass Works, Burlington, Wis.  
C.—Crane Co., Chicago, Ill.  
Edna Brass Mfg. Co., The, Cincinnati, O.  
Essex Brass Corp., Detroit, Mich.  
Eureka—Eureka Brass Works, Inc., Cincinnati, O.

Exeter Brass Works, Exeter, N. H.  
Fries & Co., Buffalo, N. Y.  
Glauber Brass Mfg. Co., Cleveland, O.  
Hamlin & Emery Brass Co., The, Boston, Mass.  
Haydenville Co., The, Haydenville, Mass.  
♦ Hays Mfg. Co., Erie, Pa.  
♦ Imperial Brass Mfg. Co., Chicago, Ill.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
Leader—Randle Machinery Co., Cincinnati, O.  
Lunkenheimer Co., The, Cincinnati, O.  
McCarthy, Felix, Pottstown, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
♦ McRae & Roberts Co., Detroit, Mich.  
Milwaukee Valve Co., Milwaukee, Wis.  
Mueller, H., Mfg. Co., Decatur, Ill.  
National Brass Mfg. Co., Rochester, N. Y.  
Nason Mfg. Co., New York, N. Y.  
Nichol & Co., Thos. J., Cincinnati, O.  
Oots—Acheson Mfg. Co., Braddock, Pa.  
Perkes, Chas., Co., Philadelphia, Pa.  
Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.  
Pittsburgh Valve & Fittings Co., Barborton, O.  
Powhatan Brass & Iron Wks., Ranson, W. Va.  
♦ Powell Co., The Wm., Cincinnati, O.  
Presto—The Leslie Co., Lyndhurst, N. J.  
Rhode Island—Rhode Island Fittings Co., Hills Grove, R. I.  
Richardson Brass Co., Edro, Baltimore, Md.  
Richter—Richter Co., Cincinnati, O.  
♦ Sherman Mfg. Co., E. B., Battle Creek, Mich.  
♦ Sterling & Skinner Mfg. Co., The, Detroit, Mich.  
United Brass Mfg. Co., Cleveland, O.  
♦ Walworth Mfg. Co., Boston, Mass.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

### UNIONS, BRACING.

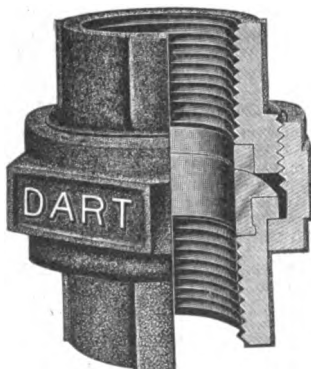
♦ Powell, Wm. Co., The, Cincinnati, Ohio.

### UNIONS, BRONZE.

Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
Exeter Brass Works, Exeter, N. H.  
Kennedy-Stroh Corp., Pittsburg, Pa.  
♦ Powell Co., The Wm., Cincinnati, O.  
Richardson, Edro, Brass Co., Baltimore, Md.  
Tuxeda—Franklin Williams Co., Inc., New York, N. Y.  
Universal—Connor, M. A., Lockport, N. Y.

### UNIONS, CASING.

Newbury, Jay Herbert, Goshen, N. Y.



## DART Union Fittings

Bronze to Bronze  
at the joint

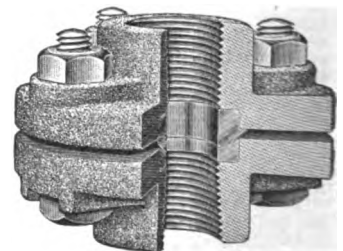
Built for Service and Guaranteed

A Free Sample Will Show You

E. M. Dart Mfg. Co., Providence, R. I.

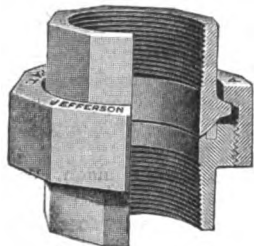
The Fairbanks Company  
Gen'l Distributors

Dart Union Co., Ltd.  
Toronto, Can.

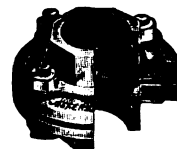




# Jefferson Unions Stay Tight



They make strong, non-corroding, non-leaking joints that are vibration proof. The brass ring bedded in the iron is protected from being jammed by the pipe end and from the contents of the pipe.



*Look for the Name on the Nut*

*Ask Your Jobber*

Write for Illustrated Catalog of "Jefferson" Unions and Pipe Fitting Specialties

MANUFACTURED BY

## Jefferson Union Company

Lexington, Mass.

### UNIONS, CAST IRON.

- C.—Crane Co., Chicago, Ill.
- Devlin Mfg. Co., Thos., Philadelphia, Pa.
- Gem Mfg. Co., Pittsburgh, Pa.
- General Fire Extinguisher Co., Providence, R. I.
- Hays Mfg. Co., Erie, Pa.
- Illinois Malleable Iron Co., Chicago, Ill.
- Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Walworth Mfg. Co., Boston, Mass.

### UNIONS, COMBINATION, BRASS TO IRON SEAT.

- Bard Patent—Bard Union Co., Inc., Norwich, Conn.
- Belfield Co., H., Philadelphia, Pa.
- C-D—Illinois Malleable Iron Co., Chicago, Ill.
- Chicago, Octo Chicago, Railroad & Navy—Crane Co., Chicago, Ill.
- Corley—Corley-De Wolfe Co., Elizabeth, N. J.
- Dart—E. M. Dart Mfg. Co., Providence, R. I.
- Excell—Providence Fittings Co., Boston, Mass.
- Goodall—Goodall Union Mfg. Co., Chelsea, Mass.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Ill.
- Illinois—Illinois Malleable Iron Co., Chicago, Ill.
- Imoco, Nokoros, C. D. Railroad—Illinois Malleable Iron Co., Chicago, Ill.
- ◆ Jefferson Union Co., Lexington, Mass.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Kewanee—Walworth Mfg. Co., Boston, Mass.
- Keystone—Stanley G. Flagg & Co., Philadelphia, Pa.
- ◆ Mark—Mark Mfg. Co., Chicago, Ill. (steel).
- ◆ Nokoros—Illinois Malleable Iron Co., Chicago, Ill.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Rhode Island—Rhode Island Fittings Co., Hills Grove, R. I. (bronze seat).
- Rockwood Sprinkler Co., of Mass., Worcester, Mass.
- Star—Star Mfg. Co., The, Providence, R. I.
- Stoddard Union Co., Lockport, N. Y.
- Webbco—F. W. Webb Mfg. Co., Boston, Mass.

### UNIONS, COPPER SEAT.

- Kane's—Devlin Mfg. Co., Thos., Philadelphia, Pa.
- ◆ Walworth Mfg. Co., Boston, Mass.

### UNIONS, DOUBLE SCREWED.

- Josam Shoor-Lighn—Josam Mfg. Co., Michigan City, Ind.

### UNIONS, FLANGE.

- Acheson Mfg. Co., Braddock, Pa.
- American Foundry & Mfg. Co., St. Louis, Mo.
- Bard Patent—Bard Union Co., Inc., Norwich, Conn.

- Belfield Co., H., Philadelphia, Pa.
- Blair Mfg. Co., Camden, N. J.
- Canton Supply Co., Canton, Ohio.
- C.—Crane Co., Chicago, Ill.
- Darling Pump & Mfg. Co., The, Williamsport, Pa.
- Dart—E. M. Dart Mfg. Co., The, Providence, R. I.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Devlin Mfg. Co., Thos., Philadelphia, Pa.
- Galva Heater Co., The, Galva, Ill.
- Glenn Mfg. Co., St. Charles, Ill.
- Gulderland Foundry Co., Gulderland, N. Y.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Ill.
- Herbert—The Herbert Boiler Co., Chicago, Ill.
- Hofmann Mfg. Co., E., Milwaukee, Wis.
- Illinois Malleable Iron Co., Chicago, Ill.
- ◆ Jefferson Union Co., Lexington, Mass.
- ◆ Kelly & Jones Co., Greensburg, Pa.
- ◆ Kewanee—Walworth Mfg. Co., Boston, Mass.
- Limbirt & Co., Geo. B., Chicago, Ill.
- McCambridge Co., Philadelphia, Pa.
- McNab & Harlin Mfg. Co., New York, N. Y.
- Newbury, Jay H., & Co., Goshen, N. Y.
- Newbury Mfg. Co., Monroe, N. Y.
- Oil Well Supply Co., Pittsburgh, Pa.
- Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- Ravenna Iron Co., Ravenna, N. Y.
- Richardson, Edro Brass Co., Baltimore, Md. (Brass.)
- Toledo—Franklin Williams, Inc., New York, N. Y.
- Universal—M. A. Connor, Lockport, N. Y.

### UNIONS, FLANGE, EXTRA HEAVY.

- Bard Patent—The Bard Union Co., Norwich, Conn.
- ◆ Jefferson Union Co., Lexington, Mass.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Newbury, Jay H., & Co., Goshen, N. Y.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- ◆ Walworth Mfg. Co., Boston, Mass.

### UNIONS, FLANGED.

- ◆ Powell, Wm., Co., The, Cincinnati, Ohio.

### UNIONS, GROUND JOINT.

- Acheson Mfg. Co., Braddock, Pa.
- Atkinson Co., The, Rochester, N. Y.
- Bard Patent—The Bard Union Co., Inc., Norwich, Conn.
- Buck—Standard Union Co., Boston, Mass.
- Burlington Brass Works, Burlington, Wis.

- Exeter Brass Works, Exeter, N. H.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kewanee—Walworth Mfg. Co., Boston, Mass.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 ♦ Mokros, Illinois—Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Mokros—Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 ♦ Utica Valve Fixture Co., Utica, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 ♦ Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### UNIONS, HYDRAULIC.

- Canton Supply Co., Canton, O.  
 Crane Co., Chicago, Ill.  
 Kaltenthaler, H. J., Philadelphia, Pa.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kewanee—Walworth Mfg. Co., Boston, Mass.  
 ♦ Pittsburg Brass Mfg. Co., Pittsburg, Pa.  
 Toledo—Franklin Williams, Inc., New York, N. Y.

#### UNIONS, LEAD AND IRON CONNECTION.

- Athol Pump Co., Athol, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Mueller Mfg. Co., H., Decatur, Ill.

#### UNIONS, MALLEABLE IRON.

- Bard Patent—The Bard Union Co., Norwich, Conn.  
 C.—Crane Co., Chicago, Ill.  
 Codd Tank & Specialty Co., Baltimore, Md.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Erie—Jarecki Mfg. Co., Erie, Pa.  
 FF—Stanley G. Flagg & Co., Philadelphia, Pa.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 I. M. I. Co., C. D. Railroad—Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy-Stroh Corp., Pittsburgh, Pa.  
 Keystone—Stanley G. Flagg & Co., Philadelphia, Pa.  
 Oil Well Supply Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Rhode Island Fittings Co., Hills Grove, R. I.  
 Star—The Star Mfg. Co., Providence, R. I.  
 Universal—M. A. Connor, Lockport, N. Y.  
 ♦ Walco—Walworth Mfg. Co., Boston, Mass.  
 Webco—F. W. Webb Mfg. Co., Boston, Mass.

#### UNIONS, PRESSED STEEL, WITH BRONZE SEATS.

- Rockwood Sprinkler Co., of Mass., Worcester, Mass.

#### UNIONS, RANGE BOILER.

- Acheson Mfg. Co., Braddock, Pa.  
 American Brass & Iron Co., Detroit, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jefferson Union Co., Lexington, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Universal—M. A. Connor, Lockport, N. Y.

#### UNIONS, REDUCING.

- ♦ Jefferson Union Co., Lexington, Mass.

#### UNIONS, SOIL PIPE.

- Athol Pump Co., Athol, Mass.

#### UNIONS, SOLDERING.

- American Foundry & Mfg. Co., St. Louis, Mo.  
 Atkinson Co., The, Rochester, N. Y.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Burlington Brass Works, Burlington, Wis.  
 C. C.—Crane Co., Chicago, Ill.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Farnam Brass Works, Cleveland, O.  
 Fries & Co., Buffalo, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 ♦ Hays Mfg. Co., Erie, Pa.  
 Healey, P., Evansville, Ind.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kruecke Bros. Mfg. Co., Milwaukee, Wis.  
 Lippold Valve Co., Erie, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Monarch Brass Co., The, Cleveland, O.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Okay—E. Stebbins Mfg. Co., Springfield, Mass.  
 Prier Brass Mfg. Co., Kansas City, Mo.  
 Powhatan Brass & Iron Wks., Ranson, W. Va.  
 Rockford Brass Works, Rockford, Ill.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Seattle Brass Co., Seattle, Wash.

- Standard—Rockford Brass Works, Rockford, Ill.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### UNIONS, STEAM ROSE.

- Mokros—Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Norustocta—The Kelly & Jones Co., Greensburg, Pa.

#### UNIONS, STEEL, COLD-DRAWN.

- Steel & Tube Co. of America, Chicago, Ill.

#### UNIONS, SWING.

- ♦ Jefferson Union Co., Lexington, Mass.  
 Grip Coupling Co., Ware, Mass.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.

#### UNIONS, VENT.

- Powhatan Brass & Iron Works, Ranson, W. Va.

#### UNLOADERS, AIR COMPRESSOR.

- Erie—Jarecki Mfg. Co., Erie, Pa.  
 ♦ Yarway—Yarnall-Waring Co., Philadelphia.

#### UNLOADERS, BALLAST.

- Marion Steam Shovel Co., Marion, O.

#### UNLOADERS, FREIGHT CAR.

- Acme Road Machinery Co., Frankfort, N. Y.  
 Blehl Iron Works, Inc., The, Reading, Pa.  
 Brown Portable Conveying Mach. Co., Chicago, Ill.  
 Burch—Burch Plow Works Co., Crestline, O. (sand and gravel).  
 Gallon Iron Works & Mfg. Co., Gallon, Ohio. (Sand and gravel).  
 Godfrey Conveyor Co., Elkhart, Ind.  
 Haiss—Geo. Haiss Mfg. Co., New York, N. Y.  
 Lidgerwood Mfg. Co., New York, N. Y.  
 Link-Belt Company, Chicago and Philadelphia.  
 Osgood Co., The, Marion, Ohio. (Ballast).  
 Quick Unloading Car Chute Co., Birmingham, Ala.  
 Reliance—Universal Road Machinery Co., Kingston, N. Y.  
 Seaverns, James B., Chicago, Ill.  
 Scoop Conveyor—Portable Machinery Co., Inc., Passaic, N. J.  
 Specialty Engineering Co., Philadelphia, Pa.  
 Standard Conveyor Co., North St. Paul, Minn.

#### UNLOADERS AND CONVEYORS, PNEUMATIC.

- Guarantee Construction Co., New York, N. Y.

#### UPSETTERS, TIRE.

(See also "Shrinkers, Tire.")

- Ajax Mfg. Co., Cleveland, O.  
 Buffalo Forge Co., Buffalo, N. Y.  
 Kane & Roach, Syracuse, N. Y.

#### URINALS.

(See, also, "Stalls" and "Ranges, Urinal.")

- American—American Warming & Ventilating Co., Elmira, N. Y.  
 Bedfordshire—The J. L. Mott Iron Works, Trenton, N. J.  
 Beekman—The J. L. Mott Iron Works, Trenton, N. J.  
 Belmar—McCambridge Co., Philadelphia, Pa.  
 Belmont—McCambridge Co., Philadelphia, Pa.  
 Clow, James B. & Sons, Chicago, Ill.  
 Craig's Improved—David Craig, Boston, Mass.  
 D. L.—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Director, Detroit—The J. L. Mott Iron Works, Trenton, N. J.  
 Edwardsville Brass Works, Edwardsville, Ill.  
 Ejector—F. W. Webb Mfg. Co., Boston, Mass.  
 Flushometer—Kenney Mfg. Co., New York, N. Y.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hygeia—Crane Co., Chicago, Ill.  
 Hygeia—James B. Clow & Sons, Chicago, Ill.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Johnson, J. D., Co., Philadelphia, Pa. Trade Names—Holly, Purity, Chisholm, Rex, Saxon.  
 Kenney—The Kenney Mfg. Co., New York, N. Y.  
 MaGill, P. H., Fdy. & Furnace Works, Bloomington, Ill.  
 Madstone—Thos. Maddock's Sons Co., Trenton, N. J.  
 Manhattan—Peck Bros. Co., New Haven, Conn.  
 Metropolitan—The J. L. Mott Iron Works, Trenton, N. J.  
 Nautilus—McCambridge Co., Philadelphia, Pa.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Newport—The J. L. Mott Iron Works, Trenton, N. J.  
 Oxford—The Meyer-Sniffen Co., New York, N. Y.

Purita—The J. L. Mott Iron Works, Trenton, N. J.  
 Sanic Safety—The Hydraulic Specialty Co., Philadelphia, Pa.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Sanito—The J. L. Mott Iron Works, Trenton, N. J.  
 Sherbrooke, Star Syphon—F. W. Webb Mfg. Co., Boston, Mass.  
 Stevens—The J. L. Mott Iron Works, Trenton, N. J.  
 Sypho—McCambridge Co., Philadelphia, Pa.  
 Union Sanitary Works, Noblesville, Ind.  
 Utica—The J. L. Mott Iron Works, Trenton, N. J.  
 ♦ Watrous-Duojet—Imperial Brass Mfg. Co., Chicago, Ill.  
 Wentworth—F. W. Webb Mfg. Co., Boston, Mass.  
 Wolff Co., Chicago, Ill.

**URINALS, CAST IRON.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Barber Mfg. Co., The, Ashtabula, O.  
 Beekman—J. L. Mott Iron Wks., New York.  
 Central Foundry Co., New York, N. Y.  
 Jones Hollow Ware Co., Baltimore, Md.  
 McCambridge Co., Philadelphia, Pa.

**URINALS, CREMATING.**

Ma Girl Foundry & Machine Works, Bloomington, Ill.

**URINALS, FLUSHING VALVE.**

(See also "Valves, Urinal Flushing.")

Atlas, Glanto, Rayber—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Royal Sloan, Sloan-Royal—Sloan Valve Co., Chicago, Ill.

**URINALS, PORCELAIN.**

American—American Warming & Ventilating Co., Elmira, N. Y.  
 Armstrong—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Bellevue, Belton—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Bellmark Pottery Co., Trenton, N. J.  
 Capoco—Camden Pottery Co., Camden, N. J.  
 Cochran, Drugan & Co., Trenton, N. J.  
 Columbian—L. Wolff Mfg. Co., Chicago, Ill.  
 Ebco—D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Eljer—Eljer Co., Cameron, W. Va. Trade names—Bedfordshire, Correcto, Wall, Y. M. C. A.  
 Florentine Pottery Co., Chillicothe, O.  
 Fords Porcelain Works, Perth Amboy, N. J.  
 Great Western Pottery Co., The, Kokomo, Ind.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Hera—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Hinsdale—Federal-Huber Co., Chicago, Ill.  
 Ideal—The Trenton Potteries Co., Trenton, N. J.  
 Keystone—Monument Pottery Co., Trenton, N. J.  
 Maddocks & Sons, John, Trenton, N. J.  
 Olympia—The John Douglas Co., Cincinnati, O.  
 Pacific Porcelain Ware Co., San Francisco, Cal.  
 Protector, Quaker City, Regal—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Sanitas Mfg. Co., Boston, Mass. (Trade names—Crown, Terminal, Revere, Simplicity.)  
 SESCO—Sanitary Earthenware Specialty Co., Trenton, N. J.  
 Sanito—J. L. Mott Iron Works, Trenton, N. J.  
 Windsor—The John Douglas Co., Cincinnati, O.

**URINALS, PORCELAIN ENAMELED.**

Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Beekman, Utica—Mott Iron Works, The J. L., Trenton, N. J.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 Keystone—Keystone Supply & Mfg. Co., Philadelphia.  
 Kohler—Kohler Co., Kohler, Wis.  
 McCambridge Co., Philadelphia, Pa.  
 MaGirl, P. H., Foundry & Furnace Works, Bloomington, Ill.  
 Manhattan—The Peck Bros. & Co., New Haven, Conn.  
 Model—Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Pacific Sanitary Mfg. Co., San Francisco, Calif.  
 Rundle—Rundle Mfg. Co., Milwaukee, Wis.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Union Sanitary Mfg. Co., Noblesville, Ind.  
 A. Weiskittel & Son Co., Baltimore, Md.

**URINALS, VENTILATED.**

Ebco—The D. A. Ebinger Sanitary Mfg. Co., Columbus, O. (octagon and wall.)  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.

**URINALS, VITREOUS CHINA.**

Abingdon Sanitary Mfg. Co., Abingdon, Ill.  
 Avon—Wheeling Sanitary Mfg. Co., Wheeling, W. Va.  
 Bedfordshire—Resolute Pottery Co., Trenton, N. J.  
 Belmont, Belmar, Nautilus—McCambridge Co., Philadelphia, Pa.

Clearway—Federal-Huber Co., Chicago, Ill.  
 Directo, Metropolitan, Purita, Bedfordshire—J. L. Mott Iron Works, Trenton, N. J.  
 Ebinger—The D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
 Florentine Pottery Co., Cambridge, O.  
 Impervio—The Trenton Potteries Co., Trenton, N. J.  
 Jetector—Federal-Huber Co., Chicago, Ill.  
 Lampoco—Lambertville Pottery Co., Lambertville, N. J.  
 Maddock's Sons Co., Thomas, Trenton, N. J. Trade names—Madesta, Madvance.  
 National Pottery Co., Evansville, Ind.  
 Pacific—Pacific Porcelain Ware Co., San Francisco, Cal.  
 Penn Pottery Co., Philadelphia, Pa.  
 Princeton—The John Douglas Co., Cincinnati, O.  
 Standard Sanitary Pottery Co., Elizabeth, N. J.  
 Two Fired—Trenton Potteries Co., Trenton, N. J.  
 Vitrico—Monument Pottery Co., Trenton, N. J.

**URINALS, WALL PATTERN.**

Maddock's Sons Co., Thomas, Trenton, N. J. Trade Names—Madesta, Madisota, Madetto, Madapore, Madvance, Maderica.

**UTILITIES, WASTE HEAT.**

Kilemul—Kieley & Mueller, New York, N. Y.  
 Reclalmer—Davidson Heating & Construction Co., Hanover, Pa.  
 Sturtevant Co., B. F., Boston, Mass.

**VACUUM HEATING ATTACHMENT.**

Vacustat—Frederick A. Taylor, Aloany, N. Y.

**VALVE BACKINGS.**

Worcester Pressed Steel Co., Worcester, Mass.

**VALVE FILES.**

♦ Wright & Rust—Jenkins Bros., New York, N. Y.

**VALVES, ACID RESISTING.**

Acimet—Cleveland Bronze & Brass Co., Cleveland, O.  
 Ampco—American Metal Products Co., Milwaukee, Wis.  
 C. C.—Crane Co., Chicago, Ill.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Duriron—The Duriron Co., Inc., Dayton, O. (gate and globe)  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Ernst Safety First—Ernst & Co., Newark, N. J.  
 Everlasting—Everlasting Valve Co., Jersey City, N. J.  
 ♦ Homestead—Homestead Valve Mfg. Co., Inc., Homestead, Pa.  
 Imperial—Pratt Engineering & Machine Co., Atlanta, Georgia.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 Nassau Pump & Valve Co., Rockville Center, N. Y.  
 Nordstrom, Merco—Merrill Company, The, San Francisco, Cal.  
 Pioneer Alloy Products Co., Cleveland, O.  
 Raymond Lead Co., Chicago, Ill.  
 Robertson Lead Co., James, Baltimore, Md.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 United Lead Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, AIR BLAST, AUTOMATIC.**

Grammes, L. F. Sons, Allentown, Pa.

**VALVES, AIR LINE.**

Ashton Valve Co., Boston, Mass.  
 Concord Mfg. Co., Dayton, O.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
 Ideal—Ideal Specialty Co., Helena, Mont.  
 Hoffman Specialty Co., New York.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Thermotisk—Jas. P. Marsh & Co., Chicago, Ill.

**VALVES, AIR, PNEUMATIC TOOL.**

Cleveland Rock & Drill Co., The, Cleveland, Ohio.  
 Cleco—Cleveland Pneumatic Tool Co., Cleveland, O.

**VALVES, AIR RADIATOR.**

(See "Valves, Radiator, Air.")

**VALVES, AIR, FOR WATER MAINS.**

Globe—Globe Automatic Sprinkler Co., Philadelphia, Pa.  
 Caskay—Yarnall-Waring Co., Philadelphia, Pa.  
 Coffin Valve Co., Boston, Mass.  
 Ernst—Ernst & Co., Newark, N. J.

- Equitherm Control Corp., Brooklyn, N. Y.  
 ♦ Fisher Governor Co., Inc., The, Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Ludlow Valve Mfg. Co., The, Troy, N. Y.  
 Marsh—Jas. P. Marsh & Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 National Gauge Co., Brooklyn, N. Y.  
 National Steam Specialty Co., Chicago, Ill.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Rensselaer Valve Co., Troy, N. Y.  
 Simplex Valve & Meter Co., Philadelphia, Pa.  
 Standard Spiral Pipe Works, Chicago, Ill.  
 Wood & Co., R. D., Philadelphia, Pa.

#### VALVES, ALARM, FOR SPRINKLER SYSTEMS.

- Automatic Sprinkler Construction Co., Chicago, Ill.  
 Eady Sprinkler Co., Laconia, N. H.  
 Grinnell—General Fire Extinguisher Co., Providence, R. I.  
 International—International Sprinkler Co., New York.  
 Rockwood Sprinkler Co., of Mass., Worcester, Mass.  
 The Globe Automatic Sprinkler Co., Cincinnati, Ohio.  
 Underwriters—Kennedy Valve Mfg. Co., Elmira, N. Y.

#### VALVES, ALL IRON.

- Powell, The, Wm., Co., Cincinnati, O.

#### VALVES, ALTITUDE.

- Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Clarke—H. W. Clark Co., Mattoon, Ill.  
 ♦ Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 ♦ Fisher Governor Co., Inc., The, Chicago, Ill.  
 ♦ Fulton—Chapin Fulton Mfg. Co., Pittsburgh, Pa.  
 Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Kitts Mfg. Co., Oswego, N. Y.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Simplex—Simplex Valve & Meter Co., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., The, Boston, Mass.  
 XX Century—Atwood & Morrill, Salem, Mass.

#### VALVES, ANEMONIA.

- American—American Valve Co., Cossackie, N. Y.  
 Ashton Valve Co., Boston, Mass.  
 Cash Co., A. W., Decatur, Ill.  
 Crane—Crane Co., Chicago, Ill.  
 Darling Valve & Mfg. Co. (Limited), Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Equitherm Control Corp., Brooklyn, N. Y.  
 Ernst—Ernst & Co., Newark, N. J.  
 Hennebohle Co., Chicago, Ill. (suction and high pressure check).  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 ♦ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 Ruemmel-Dawley Mfg. Co., St. Louis, Mo.  
 Vogt, Henry, Machine Co., Inc., Louisville, Ky.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 York—York Mfg. Co., York, Pa.

#### VALVES, ANGLE, BRASS AND BRONZE.

- Albany Steam Trap Co., Albany, N. Y.  
 American Ball Valve & Mfg. Co., Detroit, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American—American Valve Mfg. Co., Cossackie, N. Y.  
 Arrow—Star Brass Mfg. Co., Boston, Mass.  
 Bashlin—The Bashlin Co., Warren, Pa.  
 Bayer—Bayer Co., The, St. Louis, Mo.  
 Belleville Pattern—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Central—The Central Brass Mfg. Co., Cleveland, O.  
 Clean Seat—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Columbus—The Columbus Brass Co., Columbus, O.  
 Corset—United Brass Mfg. Co., Cleveland, O.  
 Crane—Crane Co., Chicago, Ill.  
 Crosby—Crosby Steam Gage & Valve Co., Boston.  
 Defiance Packless Valve Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Edward Valve & Mfg. Co., The, East Chicago, Ind.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hampshire—Haydenville Co., The, Haydenville, Mass.  
 Hancock—The Hancock Insulator Co., New York.  
 Hancock—United Injector Co., New York, N. Y.  
 Hoffmann & Rilliney Mfg. Co., Milwaukee, Wis.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 Hughes Bros. Brass Works, Scranton, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Jarecki Mfg. Co., Erie, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 J. R. G., Just Right—H. Belfield Co., Philadelphia, Pa.  
 Jumbo—The Magee Valve Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.

- Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 K. M.—Kinsey & Mahler Co., Peoria, Ill.  
 K. V.—Max Machine Co., Clinton, Mass.  
 L. R. D., Providence—General Fire Extinguisher Co., Providence, R. I.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 Monarch Brass Co., Cleveland, O.  
 Multiplate—O'Malley-Bears Valve Co., Chicago, Ill.  
 Nathan Mfg. Co., New York.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 No Kut—Richardson Phenix Co., Milwaukee, Wis.  
 ♦ O-B—The Ohio Brass Co., Mansfield, O.  
 Ohio Injector Co., The, Wadsworth, O.  
 Ohio Pump & Brass Co., The, Columbus, O.  
 ♦ Penberthy Injector Co., Detroit, Mich.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Powhatan Brass & Iron Wks., Charles Town, W. Va.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Renewo—The Lunkenheimer Co., Cincinnati, Ohio.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 Rickersberg Brass Co., Cleveland, Ohio.  
 Rockford Brass Mfg. Co., Rockford, Ill.  
 Sandusky Packless Valve Co., The, Sandusky, O.  
 S. C.—The S. C. Regulator Co., Fostoria, Ohio.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Smolensky—The Smolensky Valve Co., Cleveland, O.  
 Swenson Self-Grind—The Swenson Valve Co., Decorah, Ia.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Universal Valve Co., Burlington, Wis.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wilfert, John, Co., New York, N. Y.  
 ♦ Williams—The D. T. Williams Valve Co., Cincinnati.  
 Wood & Co., R. D., Philadelphia, Pa.

#### VALVES, ANGLE, CAST STEEL.

- Hancock—United Injector Co., New York, N. Y.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Reading Valve & Fittings Co., Reading, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

#### VALVES, ANGLE, IRON BODY.

- Crane Co., Chicago, Ill.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 ♦ Ferrenewo—Lunkenheimer Co., The, Cincinnati, O.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Haydenville Co., The, Haydenville, Mass.  
 Hoffman Mfg. Co., B., Milwaukee, Wis.  
 Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Materne Mfg. Co., St. Louis, Mo.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Monarch Valve & Mfg. Co., Warren, Mass.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 P. & C.—The Pratt & Cady Co., Inc., Hartford, Conn.  
 Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 ♦ Powell, Wm. Co., The, Cincinnati, O.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 United Injector Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., The, Boston, Mass.  
 Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

#### VALVES, ANTI-FREEZING.

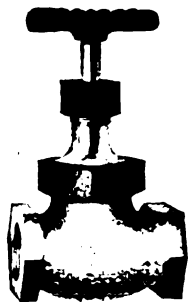
- ♦ Powell, Wm., Co., The, Cincinnati, O.

#### VALVES, AUTOMATIC EQUALIZING, OR NON-RETURN BOILER STOP.

- Berry—The Berry Engineering Co., Chester, Pa.  
 Ernst—Ernst & Co., Newark, N. J.  
 Gessinger Regulator Co., New York, N. Y.  
 ♦ Jenkins Bros., New York, N. Y.  
 Lagonda Mfg. Co., Springfield, O.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Strong—Strong, Carlisle & Hammond Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., The, Boston, Mass.

#### VALVES, BARBITT SEAT.

- Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.



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Globe Valve

# CRANE CO.



No. 461 Iron  
Gate Valve

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sizes, for all pressures, and all  
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through the trade, of pipe, heat-  
ing and plumbing materials.



Brass Cock



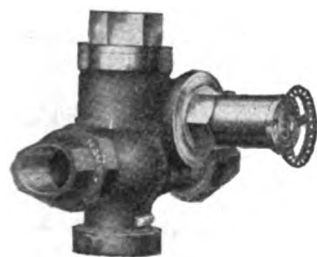
Malleable Iron  
Elbow



No. 437 Brass  
Gate Valve



No. 09 Oil  
Separator



No. 962  
Pressure Regulator



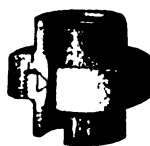
Malleable Iron  
Return Bend



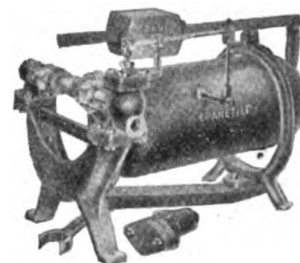
Reducing  
Flanged Tee



No. 20 Horizontal  
Brass Check Valve



Union



Non-Return  
Steam Trap

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SEATTLE  
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POCATELLO  
SALT LAKE CITY  
ODGEN  
RENO  
SACRAMENTO  
OAKLAND  
SAN FRANCISCO  
LOS ANGELES

**VALVES, BACK PRESSURE.**

- Acton—John Acton, Brooklyn, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Atlas—Monash-Younger Co., Chicago, Ill.  
 Beifield Co., H., Philadelphia, Pa.  
 Bradford—Jno. B. Perkins Co., Boston, Mass.  
 ♦ Cochrane Multiport—H. S. B. W. Cochrane Corp., Philadelphia, Pa.  
 Crane—Crane Co., Chicago, Ill.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Eclipse—Illinois Engineering Co., Chicago, Ill.  
 Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
 Everlasting Valve Co., New York.  
 ♦ Excelsior—Jenkins Bros., New York, N. Y.  
 ♦ Fisher Governor Co., Inc., The, Chicago, Ill.  
 Ford—The Thomas P. Ford Co., New York, N. Y.  
 Garrett, W. D., & Co., New York.  
 Garrett & Co., W. T., San Francisco, Cal.  
 Harrison Safety Boiler Co., Philadelphia, Pa.  
 Hennebohle Co., Chicago, Ill.  
 Hoffmann Mfg. Co., B., Milwaukee, Wis.  
 Hussey—Hussey, McCann & Co., New York, N. Y.  
 ♦ Jenkins—Jenkins Bros., New York, N. Y.  
 ♦ Jenkins Mfg. Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 K. & T.—Klippel Mfg. Co., Chicago, Ill.  
 Locke Regulator Co., Salem, Mass.  
 McAlear Mfg. Co., Chicago, Ill.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Perkes Co., Charles, Philadelphia, Pa.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 P. & C.—Pratt & Cady Co., Inc., Hartford, Conn.  
 R.-K.—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 Universal—Boylston Steam Specialty Co., Chicago, Ill.  
 Utility—Standard Steam Specialty Co., New York.  
 ♦ Walworth Mfg. Co. Co., Boston, Mass.  
 Worthington Pump & Machinery Corp., New York, N. Y.

**VALVES, BACK WATER.**

(See "Traps, Back Water.")

**VALVES, BALANCED AND LEVER.**

- Acton—John Acton, Brooklyn, N. Y.  
 American District Steam Co., North Tonawanda, N. Y.  
 Beifield Co., H., Philadelphia, Pa.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Curtis—Julian d'Este Co., Boston, Mass.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 Defender Automatic Regulator Co., St. Louis, Mo.  
 Eclipse—Illinois Engineering Co., Chicago, Ill.  
 ♦ Fisher—Fisher Governor Co., Chicago, Ill.  
 ♦ Flower—Scott Valve Mfg. Co., Detroit, Mich.  
 Ford-Colles Heater & Specialty Co., Chicago, Ill.  
 ♦ Foster—Walworth Mfg. Co., Boston, Mass.  
 Garrett, W. D., & Co., New York.  
 Harris—Arthur Harris & Co., Chicago, Ill.  
 Hennebohle Co., Chicago, Ill.  
 Hoffmann Mfg. Co., B., Milwaukee, Wis.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 Illinois Engineering Co., Chicago, Ill.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 K. & T.—Klippel Mfg. Co., Chicago, Ill.  
 Locke—Locke Regulator Co., Salem, Mass.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Mason—Mason Regulator Co., Boston, Mass.  
 Nason—Nason Mfg. Co., New York, N. Y.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Powell Co., The Wm., Cincinnati, O.  
 Power Turbo Blower Co., New York, N. Y.  
 R.-K.—Ruggles-Klingemann Mfg. Co., Salem, Mass.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Telescope—Chas. A. Claffin & Co., Boston, Mass.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Waters—Waters Governor Co., Boston, Mass.  
 Watts Regulator Co., Lawrence, Mass.  
 ♦ Foster—Walworth Mfg. Co., Boston, Mass.  
 Young, C. C., Jersey Shore, Pa.

**VALVES, BALL.**

- American Ball Valve & Mfg. Co., Detroit, Mich.  
 Fairbanks Sphero—The Fairbanks Co., New York, N. Y.  
 Farrell—Pratt & Cady Co., Inc., Hartford, Conn.  
 Hamilton Rubber Mfg. Co., Trenton, N. J.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Pioneer Rubber Mills, San Francisco, Calif.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Wolverine Brass Works, Grand Rapids, Mich.

**VALVES, SILGE, STOP AND CHECK.**

Ford—Ford Regulator Corp., New York, N. Y.

**VALVES, BLAST FURNACE.**

Everlasting Valve Co., New York.  
 Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.

**VALVES, BLOW GUN.**

♦ Powell, Wm., Co., The, Cincinnati, O.

**VALVES, BLOWER.**

American Safety Lamp & Mine Supply Co., Scranton, Pennsylvania.  
 d'Este, Julian, Co., Boston, Mass.  
 Nathan Mfg. Co., New York, N. Y.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.

**VALVES, BLOW-OFF.**

(See, also, "Cocks, Blowoff" and "Cocks, Asbestos Packed.")

- John Acton, Brooklyn, N. Y.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Bashlin—The Bashlin Valve Co., Warren, Pa.  
 Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Clean Seat—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Crane—Crane Co., Chicago, Ill.  
 Crosby—Crosby Steam Gage & Valve Co., Boston, Mass.  
 ♦ Cyclone—The Wm. Powell Co., Cincinnati, O.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Duplex—O'Malley-Bearse Valve Co., Chicago, Ill.  
 ♦ Duro—The Lunkenheimer Co., Cincinnati, O.  
 Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Eclipse—Illinois Engineering Co., Chicago, Ill.  
 Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
 Ernst—Ernst & Co., Newark, N. J.  
 Everlasting—Everlasting Valve Co., Jersey City, N. J.  
 Eynon-Evans Mfg. Co., Philadelphia, Pa.  
 Faber Self Cleaning—Elliott Co., Jeannette, Pa.  
 Garrett, W. D., & Co., New York.  
 Garratt, W. T., & Co., Inc., San Francisco, Cal.  
 Hancock—Hancock Inspirator Co., New York, N. Y.  
 Hart—Nathan Mfg. Co., New York.  
 Hennebohle Co., Chicago, Ill.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Homestead Combination—Homestead Valve Mfg. Co., Homestead, Pa. (Semi Steel.)  
 Indestructible—A. W. Cadman Mfg. Co., Pittsburgh, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Johnstone—Crosby Steam Gage & Valve Co., Boston, Mass.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Konold, M. J., Pittsburgh, Pa.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Lytton—Lytton Mfg. Corp., Franklin, Va.  
 ♦ McGowan—John H. McGowan Co., The, Cincinnati, Ohio.  
 ♦ McRae & Roberts Co., The, Detroit, Mich.  
 Multiplate—O'Malley Bearse Valve Co., Chicago, Ill.  
 Murray Specialty Mfg. Co., Detroit, Mich. (double disc)  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 ♦ O. I. Co.—Ohio Injector Co., Wadsworth, O.  
 Okadee—Amco Sales Corp., Chicago, Ill.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Renewable—Star Brass Mfg. Co., Boston, Mass.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 Rigglin—Monarch Machine Works, Altoona, Pa.  
 Robertson—Robertson Co., John F., Pittsburgh, Pa.  
 Rothschild—John Simmons Co., New York, N. Y.  
 Schiller—Joseph F. Schiller, Philadelphia, Pa.  
 Security—Wm. T. Fowden, Chester, Pa.  
 Sphero—The Fairbanks Co., New York, N. Y.  
 Strong, Carlisle & Hammond Co., Cleveland, O.  
 Tessmer Machine & Tool Co., Detroit, Mich.  
 United Injector Co., New York, N. Y.  
 Vance—Colles Heater & Specialty Co., Chicago, Ill.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Ward—Steam Appliance Co., West Allis, Wis.  
 W. & McD.—Watson & McDaniel Co., Philadelphia, Pa.  
 ♦ Yarway—The Yarnall-Waring Co., Philadelphia, Pa.  
 ♦ "Y"—The Wm. Powell Co., Cincinnati, O.

**VALVES, BOILER.**

♦ Powell Co., The Wm., Cincinnati, O.

**VALVES, BUTTERFLY.**

Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Crane—Crane Co., Chicago, Ill.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.



- Glenn Mfg. Co., St. Charles, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 ♦ Lunkenheimer Co., The, Cincinnati, O. (iron and brass)  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Pelton—Pelton Water Wheel Co., San Francisco, Cal.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, BY-PASS.**

- Darling Valve & Mfg. Co., Williamsport, Pa.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 ♦ Fisher Governor Co., Inc., The, Chicago, Ill.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Marsh, Jas P., Co., Chicago, Ill.  
 ♦ Mason—Mason Regulator Co., Boston, Mass.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 ♦ Victor—The Lunkenheimer Co., Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Watson—Stillman Co., The, New York (hydraulic).  
 Worthington Pump & Machinery Corp., New York.

**VALVES, CHECK, AIR.**

- Brunner Mfg. Co., Utica, N. Y.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 S. C.—The S. C. Regulator Mfg. Co., Fostoria, O.

**VALVES, CHECK, ANGLE, WITH UNION.**

Commonwealth Brass Corp., Detroit, Mich.

**VALVES, CHECK, BALL.**

- Darling—The Darling Valve & Mfg. Co., Ltd., Williamsport, Pa.  
 Draper—The Draper Mfg. Co., Port Huron, Mich.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 ♦ Powell Co., The Wm., Cincinnati, O.

**VALVES, CHECK, BRASS AND BRONZE.**

- Acton—John Acton, Brooklyn, N. Y.  
 Albany—Albany Steam Trap Co., Albany, N. Y.  
 American Ball Valve & Mfg. Co., Detroit, Mich.  
 American—American Valve Co., Coxsack, N. Y.  
 Athol Pump Co., Athol, Mass.  
 Bailey Horz—The Mutual Supply Co., Newark, N. J.  
 Bashlin—The Bashlin Co., Warren, Pa.  
 Bayer—Bayer Co., The, St. Louis, Mo.  
 Belfield Co., H., Philadelphia, Pa.  
 Bourbon—The Bourbon Copper & Brass Works, Cincinnati, O.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Coffin—Coffin Valve Co., Boston, Mass.  
 Cook, A. D., Lawrenceburg, Ind.  
 Corry—Trill Indicator Co., Corry, Pa.  
 Corset—United—United Brass Mfg. Co., Cleveland, O.  
 Crane—Crane Co., Chicago, Ill.  
 Crosby Steam Gage & Valve Co., Boston, Mass.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Douglas—W. & B. Douglas, Middletown, Conn.  
 Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Ellipse—Hucheson Steam Specialty Co., Chicago, Ill.  
 Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
 ♦ Excelsior—The Kelly & Jones Co., Greensburg, Pa.  
 Fairbanks—The Fairbanks Co., New York, N. Y. (brass).  
 Fleur De Lis—Boston Steam Specialty Co., Boston, Mass.  
 Garrett & Co., W. T., San Francisco, Cal.  
 G. F. E.—General Fire Extinguisher Co., New York, N. Y.  
 Goetz—Goetz Brass Company, Chicago, Ill.  
 Hancock Inspirator Co., The, New York, N. Y.  
 Hancock—United Injector Co., New York, N. Y.  
 Harvey's, A., Sons, Mfg. Co., Ltd., Detroit, Mich.  
 Haydenville Co., The, Haydenville, Mass.  
 Hays Mfg. Co., Erie, Pa.  
 Hennebelle Co., Chicago, Ill.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Hughes Bros. Brass Works, Scranton, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Jarecki Mfg. Co., Erie, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Kelly Controller Co., Chicago, Ill.  
 Kennedy—The Kennedy Valve Mfg. Co., Elmira, N. Y.  
 K. & M.—Kinsey & Mahler Co., Peoria, Ill.  
 K. V.—Max Machine Co., Clinton, Mass.  
 Lawler—Lawler Regulator Co., New York, N. Y.  
 Lee—The Wm. O. Lee Co., Port Huron, Mich.  
 Lippold Valve Co., The, Erie, Pa.

- Locke—Locke Regulator Co., Salem, Mass.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Mahbs Hydraulic Packing Co., Chicago, Ill.  
 ♦ Michigan—Scott Valve Mfg. Co., Detroit, Mich.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 Moak Machine & Tool Co., Port Huron, Mich.  
 Moite Brass Co., Springfield, O.  
 Mueller Non Fouling—H. Mueller Mfg. Co., Decatur, Ill.  
 Multiplate—O. Malley-Bears Valve Co., Chicago, Ill.  
 Nathan Mfg. Co., New York, N. Y.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Never Fail—Red Jacket Mfg. Co., Davenport, Ia.  
 Nokut—Richardson Phenix Co., Milwaukee, Wis.  
 Noiseless—Locke Regulator Co., Salem, Mass.  
 Northern Equipment Co., Chicago, Ill.  
 ♦ O-B—The Ohio Brass Co., Mansfield, O.  
 ♦ O. I. Co.—The Ohio Injector Co., Wadsworth, O.  
 P. & C.—The Pratt & Cady Co., Hartford, Conn.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Renewo—The Lunkenheimer Co., Cincinnati, O.  
 Powhatan Brass & Iron Works, Ransom, W. Va.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Renewable—Star Brass Mfg. Co., Boston, Mass.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y. (horizontal only).  
 Richardson—Phenix Co., Milwaukee, Wis.  
 Rickersberg Brass Co., Cleveland, O.  
 Robertson Rotating—John F. Robertson Co., Pittsburgh, Pa.  
 Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.  
 Sanos—Jenkins Mfg. Co., New York, N. Y.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 S. C.—The S. C. Regulator Co., Fostoria, O.  
 Smolensky—The Smolensky Valve Co., Cleveland, O.  
 Strong—Strong, Carlisle & Hammond Co., Cleveland, O.  
 Swenson Valve Co., Decorah, Ia.  
 United States Air Compressor Co., Cleveland, O.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Van Wel—The Haydenville Co., Haydenville, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Williams—D. T. Williams Valve Co., Cincinnati, O.  
 Wolff Mfg. Co., Chicago, Ill.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Worthington Pump & Machine Corp., New York.

**VALVES, CHECK, CAST STEEL.**

- ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, CHECK, WITH DRIP COCK.**

- Fairbanks—The Fairbanks Co., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 ♦ Jenkins—Jenkins Bros., New York, N. Y.  
 ♦ McKee & Roberts Co., The, Detroit, Mich.  
 ♦ O-B—Ohio Brass Co., Mansfield, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, CHECK, HYDRAULIC.**

- Ashton—The Ashton Valve Co., Boston, Mass.  
 Belfield Co., H., Philadelphia, Pa.  
 ♦ Caskay—Yarnall-Waring Co., Philadelphia, Pa.  
 Clean Seat—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Coffin—Coffin Valve Co., Boston, Mass.  
 Crane—Crane Co., Chicago, Ill.  
 Darling Pump & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Eastwood Wire Mfg. Co., Belleville, N. J.  
 Elmes, Chas. T., Engineering Works, Chicago, Ill.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Hennebelle Co., Chicago, Ill.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 McGowan Co., The John H., Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Monarch Valve & Mfg. Co., Warren, Mass.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer—Rensselaer Mfg. Co., Troy, N. Y.  
 Wiggins—Watson & McDaniel Co., Philadelphia, Pa.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 S. C.—The S. C. Regulator Co., Fostoria, Ohio.

- ◆ Simmons Co., John, New York, N. Y.
- ◆ Simplex—Yarnall-Waring Co., Philadelphia, Pa.
- ◆ T. J.—Tight Joint Co., New York, N. Y.
- ◆ Trojan—Ross Valve Mfg. Co., Troy, N. Y.
- ◆ Watson-Stillman Co., New York, N. Y.
- ◆ Wood, William H., Media, Pa.
- ◆ Wood & Co., R. D., Philadelphia, Pa.

**VALVES, CHECK, IRON BODY.**

- Crane Co., Chicago, Ill.
- ◆ Darling Valve & Mfg. Co., Williamsport, Pa.
- ◆ Duriron—Duriron Castings Co., Dayton, O.
- ◆ Eddy Valve Co., Waterford, N. Y.
- ◆ Fairbanks—The Fairbanks Co., New York, N. Y.
- ◆ Flower Valve Mfg. Co., Detroit, Mich.
- ◆ Jarecki Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- ◆ Ludlow Valve Mfg. Co., Troy, N. Y.
- ◆ McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ Ohio Injector Co., The, Wadsworth, O.
- ◆ Pittsburgh Valve & Fittings Co., Barberton, O.
- ◆ Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- ◆ Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Warlo—Ward-Love Pump Corp., Rockford, Ill.

**VALVES, CHECK, LIFT.**

- Farnsworth—Farnsworth Co., Conshohocken, Pa.

**VALVES, CHECK, LOCOMOTIVE LINE.**

- Edna Brass Mfg. Co., The, Cincinnati, Ohio.

**VALVES, CHECK, REGULATING.**

- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Lunkenheimer Co., The, Cincinnati, O.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Williams, D. T. Valve Co., The, Cincinnati, O.

**VALVES, CHECK, SWING.**

- American—American Valve Co., Coxsackie, N. Y.
- ◆ Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
- ◆ Bradford—Jno. B. Perkins Co., Boston, Mass.
- ◆ Detroit Brass & Malleable Works, Detroit, Mich.
- ◆ Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.
- ◆ Eddy—Eddy Valve Co., Waterford, N. Y.
- ◆ Enterprise—D. A. Hinman & Co., Sandwich, Ill.
- ◆ Eureka Brass Works, Inc., Cincinnati, O.
- ◆ Fairbanks—The Fairbanks Co., New York, N. Y.
- ◆ Farnsworth—Farnsworth Co., Conshohocken, Pa.
- ◆ Hoffman Mfg. Co., B., Milwaukee, Wis.
- ◆ Jenkins Bros., New York, N. Y.
- ◆ Jumbo—The Magee Valve Co., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Kennedy—The Kennedy Valve Mfg. Co., Elmira, N. Y.
- ◆ Kewanee—National Tube Co., Pittsburgh, Pa.
- ◆ Lunkenheimer Co., The, Cincinnati, O.
- ◆ McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ Milwaukee Valve Co., Milwaukee, Wis.
- ◆ National Brass Mfg. Co., Rochester, N. Y.
- ◆ Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.
- ◆ O-B—The Ohio Brass Co., Mansfield, O.
- ◆ O. I. Co.—The Ohio Injector Co., Wadsworth, O.
- ◆ Pittsburgh Valve & Fittings Co., Barberton, O.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- ◆ Reading Valve & Fittings Co., Reading, Pa.
- ◆ Schwander Brass Mfg. Co., St. Louis, Mo.
- ◆ Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Smolensky—The Smolensky Valve Co., Cleveland, O.
- ◆ United—United Brass Mfg. Co., Cleveland, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Williams—The D. T. Williams Valve Co., Cincinnati, O.
- ◆ Worthington Pump & Machinery Corp., New York, N. Y.

**VALVES, CHECK, VERTICAL.**

- ◆ Detroit Brass & Malleable Works, Detroit, Mich.
- ◆ Eddy—Eddy Valve Co., Waterford, N. Y.
- ◆ Fairbanks—The Fairbanks Co., New York, N. Y.
- ◆ Glauber Brass Mfg. Co., Cleveland, O.
- ◆ Haydenville Co., The, Haydenville, Mass.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Lunkenheimer Co., The, Cincinnati, O.
- ◆ Milwaukee Valve Co., Milwaukee, Wis.
- ◆ Mueller—Mueller Mfg. Co., H., Decatur, Ill.
- ◆ W. T. C.—National Tube Co., Pittsburgh, Pa.
- ◆ Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.
- ◆ O-B—The Ohio Brass Co., Mansfield, O.
- ◆ Penberthy Injector Co., Detroit, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Robertson—John F. Robertson Co., Pittsburgh, Pa.
- ◆ Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Swaby Mfg. Co., Chicago, Ill.

- ◆ United Brass Mfg. Co., Cleveland, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Williams—The D. T. Williams Valve Co., Cincinnati

**VALVES, CHECK, WOOD LINED.**

- Boys-Porter Co., Connellsville, Pa.

**VALVES, CHRONOMETER.**

- Acton, John, Brooklyn, N. Y.
- ◆ Defender Automatic Regulator Co., St. Louis, Mo.
- ◆ Empire—The Kelly & Jones Co., Greensburg, Pa.
- ◆ Fitts—Union Water Meter Co., The, Worcester, Mass.
- ◆ Garrett—W. D. Garrett & Co., New York, N. Y.
- ◆ McAlear Mfg. Co., The, Chicago, Ill.
- ◆ R-K—Ruggles-Klingemann Mfg. Co., Salem, Mass. (Adjustable.)
- ◆ Williams Valve Co., The D. T., Cincinnati, O.

**VALVES, CISTERN.**

- Exeter Brass Works, Exeter, N. H.
- ◆ Hoffmann & Billings Mfg. Co., Milwaukee, Wis.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Wolff Mfg. Co., Chicago, Ill.

**VALVES, CLOSET VAULT.**

- Meerhoff, H. H., Richmond, Ind.
- Standard Sanitary Mfg. Co., Pittsburgh, Pa.

**VALVES, COKE OVEN.**

- ◆ Cadman—A. W. Cadman Mfg. Co., Pittsburgh, Pa.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- ◆ Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.

**VALVES, COMPRESSED GAS CYLINDER.**

- ◆ Sherwood Mfg. Co., Buffalo, N. Y.

**VALVES, CONTROLLING, WATERWORKS SUPPLY.**

- Nicholson, W. H. & Co., Wilkesbarre, Pa.
- Simplex Valve & Meter Co., Philadelphia, Pa.

**VALVES, CROSS, BRASS AND BRONZE.**

- Arrow—Star Brass Mfg. Co., Boston, Mass.
- ◆ Buckeye Iron & Brass Works, Dayton, O.
- ◆ Crane—Crane Co., Chicago, Ill.
- ◆ Fairbanks—The Fairbanks Co., New York, N. Y.
- ◆ Frankfort—Frankfort Brass Mfg. Co., Chicago, Ill.
- ◆ Garrett & Co., W. T., San Francisco, Cal.
- ◆ Hancock—United Injector Co., New York, N. Y.
- ◆ Hancock Inspirator Co., The, New York, N. Y.
- ◆ Handy, Victor—Lunkenheimer Co., Cincinnati, O.
- ◆ Jarecki Mfg. Co., Erie, Pa.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ K. & M.—Kinsey & Mahler Co., Peoria, Ill.
- ◆ McNab—Harlin Mfg. Co., New York, N. Y.
- ◆ McEae & Roberts Co., Detroit, Mich.
- ◆ Milwaukee Valve Co., Milwaukee, Wis.
- ◆ Model Star—Powell Co., The Wm., Cincinnati, O.
- ◆ New Bedford Boiler & Machine Co., New Bedford, Mass.
- ◆ O. I. Co.—Ohio Injector Co., Wadsworth, O.
- ◆ P. & C.—The Pratt & Cady Co., Hartford, Conn.
- ◆ Pittsburgh Valve & Fittings Co., Barberton, O.
- ◆ Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.
- ◆ Renewo—The Lunkenheimer Co., Cincinnati, O.
- ◆ Scott Valve Mfg. Co., Detroit, Mich.
- ◆ United Brass Mfg. Co., Cleveland, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Williams—The D. T. Williams Valve Co., Cincinnati

**VALVES, CROSS, CAST STEEL.**

- ◆ Jenkins Bros., New York, N. Y.
- ◆ Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

**VALVES, CROSS, IRON BODY.**

- ◆ Fairbanks—The Fairbanks Co., New York, N. Y.
- ◆ Garratt, W. T., & Co., Inc., San Francisco, Cal.
- ◆ Haydenville Co., The, Haydenville, Mass.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- ◆ McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ Model Star—Powell, Wm., Co., The, Cincinnati, O.
- ◆ Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Walworth Mfg. Co., Boston, Mass.
- ◆ Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

**VALVES, DASH-POT CHECK.**

- ◆ Powell, Wm., Co., The, Cincinnati, O.

**VALVES, DIAPHRAGM.**

- National Regulator Co., Chicago, Ill.

**VALVES, DOUBLE SEATED.**

Fairbanks—The Fairbanks Co., New York, N. Y.  
 Murray Specialty Mfg. Co., Detroit, Mich.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Scott Valve Mfg. Co., Detroit, Mich.

**VALVES, DRIP.**

Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Loneragan—J. E. Loneragan Co., Philadelphia, Pa.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Lunkenheimer Co., The, Cincinnati, O.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Powell, Wm. Co., The, Cincinnati, O.  
 Scott Valve Mfg. Co., Detroit, Mich.

**VALVES, DRY PIPE, AND CHECK FOR SPRINKLER SYSTEM.**

The Globe Automatic Sprinkler Co., Cincinnati, O.  
 Grinnell G. F. E.—General Fire Extinguisher Co., New York, N. Y.  
 International—International Sprinkler Co., Philadelphia, Pa.  
 Rockwood—Rockwood Sprinkler Co. of Massachusetts, Worcester, Mass.

**VALVES, ELECTRICALLY OPERATED.**

Boston Steam Specialty Co., Boston, Mass.  
 Coffin—Coffin Valve Co., Boston, Mass.  
 Columbian Iron Works, Chattanooga, Tenn.  
 Dean Control—Nelson Valve Co., Philadelphia, Pa.  
 Electrite—Sundh Electric Co., Newark, N. J.  
 Everlasting—Everlasting Valve Co., Jersey City, N. J.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Jenkins Bros.—Jenkins Bros., New York.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Locke—Locke Regulator Co., Salem, Mass.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Marvel—American Thermostat Co., Newark, N. J.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer—Rensselaer Mfg. Co., Troy, N. Y.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.

**VALVES, ERWOOD.**

Crane Co., Chicago, Ill.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.

**VALVES, EXHAUST FOR CONDENSING ENGINES.**

Foster—Foster Engineering Co., Newark, N. J.  
 Scott Valve Mfg. Co., Detroit, Mich.

**VALVES, EXHAUST RELIEF, AUTOMATIC.**

Blake Pump & Condenser Co., Fitchburg, Mass.  
 Cash Co., A. W., Decatur, Ill.  
 Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Fisher Governor Co., Inc., Chicago, Ill.  
 Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Lewis Steam Specialty & Valve Co., Philadelphia, Pa.  
 McGowan, John H. Co., Cincinnati, O.  
 Scott Valve Mfg. Co., Detroit, Mich.  
 Schutte & Koerting Co., Philadelphia, Pa.

**VALVES, EXPANSION TANK.**

Belfield, H. Co., Philadelphia, Pa.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Marsh, Jas. P. Co., Chicago, Ill.  
 National Regulators Co., Chicago, Ill.

**VALVES, EXTRA HEAVY FOR HIGH PRESSURES.**

American Foundry & Construction Co., Pittsburg, Pa.  
 Bradford—John B. Perkins Co., Boston, Mass.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Crane Co., Chicago, Ill.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Eddy—Eddy Valve Co., Watford, N. Y.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 Jarecki Mfg. Co., Erie, Pa.  
 Jenkins Bros., New York, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 Pneumercator—Pneumercator Co., Inc., New York.

Powell Co., The Wm., Cincinnati, O.  
 Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Reading Valve & Fittings Co., Reading, Pa.  
 Rensselaer Valve Co., Troy, N. Y.  
 Sandusky Packless Valve Co., The, Sandusky, O.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Seattle Brass Co., Seattle, Wash.  
 Smith Mfg. Co., The A. P., Newark, N. J.  
 Universal Valve Co., Burlington, Wis.  
 Walworth Mfg. Co., Boston, Mass.

**VALVES, PAN ENGINE.**

Fisher Governor Co., The, Chicago, Ill.  
 Strong—Strong, Carlisle & Hammond Co., Cleveland, O.

**VALVES, FIRE LINE.**

Ford—Ford Regulator Corp., New York, N. Y.

**VALVES, FLAP AND SHEAR.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 American Spiral Pipe Works, Chicago, Ill.  
 Coldwell-Wilcox Co., Newburgh, N. Y.  
 Eddy—Eddy Valve Co., Watford, N. Y.  
 Ludlow Valve Mfg. Co., Troy, N. Y.  
 Standard Spiral Pipe Wks., Chicago, Ill.

**VALVES, FLOAT.**

Acton—John Acton, Brooklyn, N. Y.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Ampico—American Pin Co., The, Waterbury, Conn.  
 American Ideal—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Atlas—Atlas Valve Co., New York, N. Y.  
 Axtell—Axtell Co., Ft. Worth, Tex.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Bishop & Babcock Co., Cleveland, O.  
 Boylston Steam Specialty Co., Chicago, Ill.  
 Buffalo—Fries & Co., Buffalo, N. Y.  
 Caldwell Co., W. E., Louisville, Ky.  
 Campbell Brass Works, J. B., Erie, Pa.  
 Capitol—Dempster Mfg. Co., Des Moines, Ia.  
 Commonwealth Brass Corp., Detroit, Mich.  
 Diamond—McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 G. M. Davis Regulator Co., Chicago, Ill.  
 Dubuque—McDonald Mfg. Co., A. Y., Dubuque, Ia. (Open tank.)  
 Eclipse—Illinois Engineering Co., Chicago, Ill.  
 Edna Brass Mfg. Co., The, Cincinnati, O.  
 Enterprise—D. A. Hinman & Co., Sandwich, Ill.  
 Everlasting Valve Co., New York.  
 Exeter Brass Works, Exeter, N. H.  
 Fisher—Fisher Governor Co., Chicago, Ill.  
 Ford—Ford Regulator Corp., New York, N. Y.  
 Foster—Walworth Mfg. Co., Boston, Mass.  
 Garrett, W. D., & Co., New York.  
 Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.  
 Haydenville Co., The, Haydenville, Mass.  
 Hinman, D. A., & Co., Sandwich, Ill.  
 Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 Humphries Mfg. Co., Mansfield, O.  
 Hydromatic—Engineers Appliance Co., Cleveland, O.  
 K. & T.—Kliffel Mfg. Co., Chicago, Ill.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Lewis—Lewis Steam Specialty & Valve Co., Philadelphia, Pa.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Mason—Mason Regulator Co., Boston, Mass.  
 Marsh, Jas. P. Co., Chicago, Ill.  
 McAlear Mfg. Co., The, Chicago, Ill.  
 Midland Improved—The Midland Brass Works, Fort Worth, Texas.  
 Modern Iron Works, Quincy, Ill.  
 Monash Younger Co., Chicago, Ill.  
 National—National Steam Specialty Co., Chicago, Ill.  
 Perfect—American Pin Co., Waterbury, Conn.  
 Perfection—Chicago Engineer Supply Co., Chicago, Ill.  
 Pierce—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 Poage—American Valve & Meter Co., Cincinnati, O.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Rex, Ronjo, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Ryan—Exeter Brass Works, Exeter, N. H.  
 Schade—Schade Valve Mfg. Co., Philadelphia, Pa.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Simmons Co., John, New York, N. Y.  
 Sterling Specialty Co., Newcomerstown, O.  
 Texas Mfg. Co., Ft. Worth, Tex.  
 Tip Top—Chicago Engineer Supply Co., Chicago, Ill.  
 Titesete—National Valve Co., San Francisco, Calif.  
 U. S. Wind Engine & Pump Co., Batavia, Ill.  
 Warlo—Ward-Love Pump Corp., Rockford, Ill.  
 Waters Governor Co., Boston, Mass.  
 Watts Regulator Co., Lawrence, Mass.  
 Western Mfg. Co., Oskaloosa, Ia.



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- Crane—Crane Co., Chicago, Ill.
- Emerson—The Emerson Steam Pump Co., Alexandria, Virginia.
- Flagg, Stanley G. & Co., Philadelphia, Pa.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.
- ◆ Lunkenhelmer Co., Cincinnati, O.
- ◆ McDonald Mfg. Co., A. Y., Dubuque, Ia.
- ◆ McGowan Co., The, John H., Cincinnati, O.
- McNab & Harlin Mfg. Co., New York, N. Y.
- Newbury's, Jay H., Son, Goshen, N. Y. (screwed).
- Newman—The Newman Mfg. Co., New York, N. Y.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.
- Ravena Iron Co., Ravena, N. Y.
- Rumsey's—Rumsey Pump Co., Ltd., Seneca Falls, N. Y.
- Smolensky—The Smolensky Valve Co., Cleveland, O.
- Standard Spiral Pipe Works, Chicago, Ill.
- Sultan—Whitman Agricultural Co., St. Louis, Mo.
- Swaby Mfg. Co., Chicago, Ill.
- Tokheim Mfg. Co., The, Cedar Rapids, Ia.
- ◆ Treaty Co., The, Greenville, O.
- ◆ Walworth Mfg. Co., Boston, Mass.
- Warlo—Ward-Love Pump Corp., Rockford, Ill.
- Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.
- Wood & Co., R. D., Philadelphia, Pa.
- Worthington Pump & Machinery Corp., New York.

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Foster Engineering Co., Newark, N. J.

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(See "Cocks, Gas," and "Valves, Globe," etc.)

### VALVES, GAS, ACCESSIBLE.

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- Western Gas Construction Co., Ft. Wayne, Ind.

### VALVES, NATURAL GAS.

- Advance & Franklin—J. A. Zurn Mfg. Co., Erie, Pa.
- American Foundry & Construction Co., Pittsburgh, Pa.
- Clean Seat—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Columbus Brass Co., Columbus, O.
- Corset—United Brass Mfg. Co., Cleveland, O.
- Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Equitherm Control Corp., Brooklyn, N. Y.
- Fairbanks—The Fairbanks Co., New York, N. Y.
- Farnan Brass Works, Cleveland, O.
- ◆ Hays Mfg. Co., Erie, Pa.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.

- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.
- ◆ O-B—Ohio Brass Co., The, Mansfield, O.
- Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- Scott—Scott Valve Mfg. Co., Detroit, Mich.
- Simplex—Halsey Mfg. Co., Philadelphia, Pa.
- Siemen—Velte Foundry & Machine Co., Mars, Pa.
- Smith Gas Engineering Co., The, Dayton, Ohio.
- Steele Engineering Co., Detroit, Mich.
- Sterling Specialty Co., Newcomerstown, O.

### VALVES, GAS REGULATING.

- ◆ Fisher Governor Co., The, Chicago, Ill.
- Fulton—Chapin Fulton Mfg. Co., Pittsburgh, Pa.
- Haydenville Co., The, Haydenville, Mass.
- Strong—The Strong, Carlisle & Hammond Co., Cleveland, Ohio.
- Watson & McDaniel Co., Philadelphia, Pa.

### VALVES, GAS RELIEF.

Fulton—Chapin-Fulton Mfg. Co., Pittsburgh, Pa.

### VALVES, GAS REVERSING, FOR FURNACES.

Amsler, Walter O., Pittsburgh, Pa.

### VALVES, GAS, THERMOSTATIC.

Lawson—Lawson Mfg. Co., Pittsburgh, Pa.

### VALVES, GASOLINE.

- Bashlin Co., The, Warren, Pa.
- Detroit Brass & Malleable Works, Detroit, Mich.
- ◆ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.
- Standard—Acme Brass Works, Detroit, Mich. (packless, quick acting, for pumps).
- Strong—The Strong, Carlisle & Hammond Co., Cleveland, O. (blending.)
- Tokheim Oil Tank & Pump Co., Fort Wayne, Ind.

### VALVES, GATE, ANGLE.

- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Weimer—Weimer Machine Works, Lebanon, Pa.
- ◆ Walworth Mfg. Co., Boston, Mass.

### VALVES, GATE, BRASS AND BRONZE.

- A. H. S.—A. Harvey's Sons Mfg. Co., Ltd., Detroit.
- Albany—Albany Steam Trap Co., Albany, N. Y.
- American—American Foundry & Mfg. Co., St. Louis.
- American—American Valve Mfg. Co., Coxsackie, N. Y.
- Atwood—The Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.
- Belknap Mfg. Co., The, Bridgeport, Conn.
- Bordo—L. J. Bordo Co., Philadelphia, Pa.
- Bourbon—The Bourbon Copper & Brass Works, Cincinnati, O.
- Buckeye Iron & Brass Works, Dayton, O.
- Capitol Brass Works, Detroit, Mich.
- Central—The Central Brass Mfg. Co., Cleveland, O.
- Cliff & Guilbert Co., New York, N. Y.
- ◆ Clip—The Lunkenhelmer Co., Cincinnati, O.
- Corset United—United Brass Mfg. Co., Cleveland, O.
- Crane—Crane Co., Chicago, Ill.
- Darling—The Darling Valve & Mfg. Co., Ltd., Williamsport, Pa.

Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Eddy Valve Co., Waterford, N. Y.  
 Eddy Pattern—South Park Foundry & Machine Co., St. Paul, Minn.  
 Edna Brass Mfg. Co., The Cincinnati, O.  
 Eureka—Eureka Brass Works, Inc., Cincinnati, O.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Federal—Nason Mfg. Co., New York, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Gaco—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Garratt's—W. T. Garratt & Co., Inc., San Francisco, Cal.

General Fire Extinguisher Co., New York, N. Y.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Hammond Brass Works, Hammond, Ind.  
 Hancock Inspirator Co., The, New York, N. Y.  
 Hancock—United Injector Co., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Healey, P., Evansville, Ind.  
 Hoffmann Mfg. Co., B., Milwaukee, Wis.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Kennedy—Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Lentionlar—Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Loyal Brass Co., Cleveland, O.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Michigan—Scott Valve Co., Detroit, Mich.  
 Milwaukee Valve Co., Milwaukee, Wis.  
 ♦ Model Star—The Wm. Powell Co., Cincinnati, O.  
 Monogram—Star Brass Mfg. Co., Boston, Mass.  
 Nelson Valve Co., The, Chestnut Hill, Philadelphia, Pa.

Nichol, Thos. J. & Co., Cincinnati, O.  
 ♦ O-B—The Ohio Brass Co., Mansfield, O.  
 O. K.—Kennedy Valve Mfg. Co., Elmira, N. Y.  
 ♦ O. I. Co.—Ohio Injector Co., Wadsworth, O.  
 O. S. & Y.—McNab & Harlin Mfg. Co., New York, N. Y.  
 P. & C.—The Pratt & Cady Co., Hartford, Conn.  
 Pelton—Pelton Water Wheel Co., San Francisco, Cal.  
 Pioneer Alloy Products Co., Cleveland, O.  
 Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburgh.

Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y.  
 Richardson-Phenix Co., Milwaukee, Wis.  
 Rick—Rickersberg Brass Co., Cleveland, O.  
 Rothchild—John Simmons Co., New York, N. Y.  
 Sandusky Packless Valve Co., The, Sandusky, O.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Schwander—Schwander Brass Mfg. Co., St. Louis, Mo.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Smith, A. P., Mfg. Co., East Orange, N. J.  
 Trump—Trump Mfg. Co., Springfield, O.  
 ♦ Union Disco—The Wm. Powell Co., Cincinnati, O.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 ♦ U. S.—The Wm. Powell Co., Cincinnati, O.  
 Utica Valve and Fittings Co., Utica, N. Y.  
 ♦ Walworth, Federal—Walworth Mfg. Co., Boston, Mass.  
 Wilfert, John, Co., New York, N. Y.  
 ♦ White Star—The Wm. Powell Co., Cincinnati, O.  
 ♦ Williams—The D. T. Williams Valve Co., Cincinnati.  
 Wood & Co., R. D., Philadelphia, Pa.

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Crane Co., Chicago, Ill.  
 ♦ Jenkins Bros., New York, N. Y.  
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 Lunkenheimer Co., The, Cincinnati, O.  
 Nelson Valve Co., Philadelphia, Pa.  
 Reading Valve & Fittings Co., Reading, Pa.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 ♦ The Kelly & Jones Co., Greensburg, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

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 Eddy—Eddy Valve Co., Waterford, N. Y.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 ♦ O-B—The Ohio Brass Co., Mansfield, O.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Reading Valve & Fittings Co., Reading, Pa.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.

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 ♦ American—American Foundry & Mfg. Co., St. Louis, Missouri.

American Valve Mfg. Co., Coxsackie, N. Y.  
 Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 ♦ Cino—D. T. Williams Valve Co., Cincinnati, O.  
 Columbian—Columbian Iron Wks., Chattanooga, Tenn.  
 Crane—Crane Co., Chicago, Ill.  
 Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Dimmick Pipe Co., The, Birmingham, Ala.  
 Eddy Valve Co., Waterford, N. Y.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 Iowa Mfg. Co., Oskaloosa, Ia.  
 Jarecki Mfg. Co., Erie, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Jumbo—The Magee Valve Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Lancaster Iron Works, Inc., Lancaster, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 Materne Mfg. Co., St. Louis, Mo.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 ♦ O. I. Co.—Ohio Injector Co., Wadsworth, O.  
 O'Meara Pat.—J. O'Meara, Inc., New York, N. Y.  
 P. & C.—The Pratt & Cady Co., Hartford, Conn.  
 Pittsburgh—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.  
 Pittsburgh Mfg. Co., Pittsburgh, Pa.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer Valve Co., Troy, N. Y.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Simplex—Pittsburgh Valve & Fittings Co., Barberton, Ohio.

Standard Spiral Pipe Works, Chicago, Ill.  
 T. C. I. W.—Traverse City Iron Works, Traverse City, Mich.  
 ♦ Victor—The Lunkenheimer Co., Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wilfert, John, Co., New York, N. Y.  
 Wood & Co., R. D., Philadelphia, Pa.

#### VALVES, GATE, LEVER.

(See "Valves, Quick-opening.")

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 Coffin Valve Co., Boston, Mass.  
 Crane—Crane Co., Chicago, Ill.  
 Eddy Valve Co., Waterford, N. Y.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Fox & Co., John, New York, N. Y.  
 ♦ Jenkins Bros.—Jenkins Bros., New York.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Ludlow—Ludlow Valve Mfg. Co., Troy, N. Y.  
 McNab & Harlin Mfg. Co., New York.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Wm., Co., The, Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer Mfg. Co., Troy, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### VALVES, GATE, WEDGE.

Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Hesterberg—Queen City Brass & Iron Works, Cincinnati, O.  
 ♦ Jenkins Bros.—Jenkins Bros., New York.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
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 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer Mfg. Co., Troy, N. Y.  
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- B. & O.-Protected Seat Valve Co., Pittsburgh, Pa.
- Bayer-Bayer Co., The, St. Louis, Mo.
- Beifield Co., H., Philadelphia, Pa.
- Belknap Mfg. Co., The, Bridgeport, Conn.
- Benton Valve Co., Metuchen, N. J.
- Bridgeman Bros. Co., Philadelphia, Pa.
- Buckeye Iron & Brass Works, Dayton, O.
- Central-The Central Brass Mfg. Co., Cleveland, O.
- Clean Seat-Pittsburgh Gage & Supply Co., Pittsburgh.
- Corset United-United Brass Mfg. Co., Cleveland, O.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Defiance-Defiance Packless Valve Co., Chicago, Ill.
- ♦ Detroit-Detroit Lubricator Co., Detroit, Mich.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Edward-Edward Valve & Mfg. Co., East Chicago, Ind.
- ♦ Excelsior-The Kelly & Jones Co., Greensburg, Pa.
- Fairbanks-The Fairbanks Co., New York, N. Y.
- Farrell Valve & Specialty Co., Buffalo, N. Y.
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- ♦ Fisher Governor Co., Inc., The, Chicago, Ill.
- Garratt & Co., W. T., San Francisco, Cal.
- Glauber Brass Mfg. Co., Cleveland, O.
- Goetz-Goetz Brass Company, Chicago, Ill.
- Hammond Brass Works, Hammond, Ind.
- Hampshire-The Haydenville Co., Haydenville, Mass.
- Hancock-The Hancock Inspirator Co., New York.
- Hancock-United Injector Co., New York, N. Y.
- Hart-Nathan Mfg. Co., New York, N. Y.
- Haydenville Co., The, Haydenville, Mass.
- Healey, P., Evansville, Ind.
- Hoffmann & Billings Mfg. Co., Milwaukee, Wis.
- Hughes Bros. Brass Works, Scranton, Pa.
- Illinois Malleable Iron Co., Chicago, Ill.
- ♦ Irrew-Wm. Powell Co., The, Cincinnati, Ohio.
- Jarecki Mfg. Co., Erie, Pa.
- ♦ Jenkins Bros.-Jenkins Bros., New York, N. Y.
- J. R. G. Just Right Guide-H. Beifield Co., Philadelphia, Pa.
- Jumbo-The Magee Valve Co., New York, N. Y.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- K. M.-Kinsey & Mahler Co., Peoria, Ill.
- K. V.-Max Machine Co., Clinton, Mass.
- Lippold-The Lippold Valve Co., Erie, Pa.
- Locke-Locke Regulator Co., Salem, Mass.
- Loyal Brass Co., Cleveland, O.
- L. R. D.-Locke Regulator Co., Salem, Mass.
- L. R. D.-General Fire Extinguisher Co., Providence, R. I.
- Marsh-Marsh Valve Co., Erie, Pa.
- McCambridge Co., Philadelphia, Pa.
- McDonald Mfg. Co., A. Y., Dubuque, Ia.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ♦ McMas & Roberts Co., Detroit, Mich.
- ♦ Milwaukee Valve Co., Milwaukee, Wis.
- ♦ Model Star-The Wm. Powell Co., Cincinnati, O.
- Monarch-Monarch Brass Co., Cleveland, O.
- Multiplate-O'Malley Beare Valve Co., Chicago, Ill.
- Nelson Valve Co., The, Chestnut Hill, Philadelphia, Pa.
- Nichol, Thos. J., & Co., Cincinnati, O.
- Nokut-Richardson Phenix Co., Milwaukee, Wis.
- Notte Brass Co., Springfield, O.
- ♦ O-B-Ohio Brass Co., Mansfield, O.
- Ohio Pump & Brass Co., The, Columbus, O.
- ♦ O. I. Co.-The Ohio Injector Co., Wadsworth, O.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.
- Powhatan Brass & Iron Wks., Ranson, W. Va.
- P. & C.-Pratt & Cady Co., Inc., The, Hartford, Conn.
- Providence-General Fire Extinguisher Co., Providence, R. I.
- Rick-Rickersberg Brass Co., Cleveland, O.
- Roberts Brass Company, Milwaukee, Wis.

- Scott-Scott Valve Mfg. Co., Detroit, Mich.
- ♦ Samson-The Lunkenheimer Co., Cincinnati, O.
- Sandusky Packless Valve Co., The, Sandusky, O.
- Schutte-Schutte & Koerting Co., Philadelphia, Pa.
- Schwander-Schwander Brass Mfg. Co., St. Louis, Mo.
- Smolensky-The Smolensky Valve Co., Cleveland, O.
- Stone, Mark, Mfg. Co., Grand Rapids, Mich.
- Storie-Scully Steel & Iron Co., Chicago, Ill.
- Swenson Self-Grind-The Swenson Valve Co., Decorah, Ia.
- Toledo-Franklin Williams, New York, N. Y.
- ♦ United Brass Mfg. Co., Cleveland, O.
- ♦ Union Disc-Powell Co., The Wm., Cincinnati, O.
- United Injector Co., New York, N. Y.
- Universal Valve Co., Burlington, Wis.
- Wilfert, John, Co., New York, N. Y.
- ♦ Walworth Mfg. Co., Boston, Mass.
- ♦ White Star-The Wm. Powell Co., Cincinnati, O.
- ♦ Williams-The D. T. Williams Valve Co., Cincinnati.

### VALVES, GLOBE, CAST STEEL.

- Hancock-United Injector Co., New York, N. Y.
- ♦ Jenkins Bros., New York, N. Y.
- ♦ Kelly & Jones Co., The, Greensburg, Pa.
- Reading Valve & Fittings Co., Reading, Pa.
- ♦ Walworth Mfg. Co., Boston, Mass.
- Whale-New Bedford Valve Mfg. Co., New Bedford, Mass.

### VALVES, GLOBE, DISC SEAT.

- Ajax-Federal Brass Works, Chicago, Ill.
- Benton Valve Co., Metuchen, N. J.
- Capitol Brass Works, Detroit, Mich.
- Eastwood Wire Mfg. Co., Belleville, N. J.
- Fairbanks-The Fairbanks Co., New York, N. Y.
- Ferrenwro, Renewo-The Lunkenheimer Co., Cincinnati, O.
- Hammond Brass Works, Hammond, Ind.
- Haydenville Co., The, Haydenville, Mass.
- Hoffmann Mfg. Co., E., Milwaukee, Wis.
- ♦ Jenkins Bros.-Jenkins Bros., New York, N. Y.
- Just Right Guide-H. Beifield Co., Philadelphia, Pa.
- ♦ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- Locke-Locke Regulator Co., Salem, Mass.
- Loyal Brass Co., Cleveland, O.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ♦ Milwaukee Valve Co., Milwaukee, Wis.
- Nathan Mfg. Co., New York, N. Y.
- W. T. C.-National Tube Co., Pittsburgh, Pa.
- ♦ O-B-Ohio Brass Co., Mansfield, O.
- "O. I. C."-The Ohio Injector Co., Wadsworth, O.
- P. & C.-Pratt & Cady Co., Inc., The, Hartford, Conn.
- ♦ Powell, Wm., Co., The, Cincinnati, O.
- Powhatan Brass & Iron Works, Charlestown, W. Va.
- Rick-Rickersberg Brass Co., Cleveland, O.
- Scott-Scott Valve Mfg. Co., Detroit, Mich.
- ♦ Union-Powell Co., The Wm., Cincinnati, O.
- United-United Brass Mfg. Co., Cleveland, O.
- ♦ Walworth Mfg. Co., Boston, Mass.

### VALVES, GLOBE, IRON BODY.

- Bull Dog Self-Cleaning-Patterson-Allen Engineering Co., New York.
- Crane-Crane Co., Chicago, Ill.
- Crosby Steam Gage & Valve Co., Boston, Mass.
- Defiance-Defiance Packless Valve Co., Chicago, Ill.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Fairbanks-The Fairbanks Co., New York, N. Y.
- Flower Valve Mfg. Co., Detroit, Mich.
- Garratt & Co., W. T., San Francisco, Cal.
- Hoffman Mfg. Co., E., Milwaukee, Wis.
- ♦ Jenkins Bros.-Jenkins Bros., New York, N. Y.
- ♦ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- ♦ Lunkenheimer Co., The, Cincinnati, O.
- Materne Mfg. Co., St. Louis, Mo.
- McNab & Harlin Mfg. Co., New York, N. Y.
- O. I. Co.-Ohio Injector Co., Wadsworth, O.
- P. & C.-The Pratt & Cady Co., Inc., Hartford, Conn.
- Pittsburgh Valve & Fittings Co., Barborton, O.
- ♦ Powell Co., The Wm., Cincinnati, O.
- Scott-Scott Valve Mfg. Co., Detroit, Mich.
- Star-Star Brass Mfg. Co., Boston, Mass.
- United Injector Co., New York, N. Y.
- ♦ Walworth Mfg. Co., Boston, Mass.
- Whale-New Bedford Valve Mfg. Co., New Bedford, Mass.

### VALVES, GLOBE, LOCKSHIELD.

- Capitol Brass Works, Detroit, Mich.
- Detroit Brass & Malleable Works, Detroit, Mich.
- Fairbanks-The Fairbanks Co., New York, N. Y.
- Haydenville Co., The, Haydenville, Mass.
- ♦ Hays Mfg. Co., Erie, Pa.
- ♦ Jenkins Bros.-Jenkins Bros., New York, N. Y.
- ♦ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- McCambridge Co., Philadelphia, Pa.
- ♦ Milwaukee Valve Co., Milwaukee, Wis.
- ♦ O-B-Ohio Brass Co., Mansfield, O.
- ♦ Powell, Wm., Co., The, Cincinnati, O.
- P. & C.-Pratt & Cady Co., Inc., The, Hartford, Conn.



Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 United Brass Mfg. Co., Cleveland, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, GLOBE, REGRINDING.**

Belleville—Eastwood Wire Mfg. Co., Belleville, N. J.  
 Crane—Crane Co., Chicago, Ill.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 ♦ Excelsior—The Kelly & Jones Co., Greensburg, Pa.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 I. B. G.—Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 Lamb—Valve Sales Co., La Crosse, Wis.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 ♦ Model Star—The Wm. Powell Co., Cincinnati, O.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 N. T. O.—National Tube Co., Pittsburgh, Pa.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 ♦ Fenberthy—Fenberthy Injector Co., Detroit, Mich.  
 ♦ Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Schade Valve Mfg. Co., Philadelphia, Pa.  
 Simmons Co., John, New York, N. Y.  
 Smolensky—The Smolensky Valve Co., Cleveland, O.  
 Swenson Valve Co., The, Decorah, Ia.  
 ♦ Union Disc—The Wm. Powell Co., Cincinnati, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Wew—Wm. E. Williams, New York, N. Y.  
 ♦ White Star—Powell Co., The Wm., Cincinnati, O.  
 ♦ Williams Valve Co., The D. T., Cincinnati, O.

**VALVES, GOVERNING, METRONOME.**

Boston Steam Specialty Co., Boston, Mass.  
 Union Water Meter Co., Worcester, Mass.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.

**VALVES, HEAT CONTROLLING.**

Knickerbocker Regulator—Knickerbocker Valve Co.,  
 Oneida, N. Y.

**VALVES, HEATING CONTROL, ELECTRIC.**

Equitherm Control Corp., New York, N. Y.

**VALVES, HIGH PRESSURE, FOR OXYGEN AND CARBONIC ACID GAS.**

Burdett Mfg. Co., Chicago, Ill.  
 ♦ Sherwood—Sherwood Mfg. Co., Buffalo, N. Y.

**VALVES, HOPPER.**

(See also "Valves, Water Closet, Frost Proof.")

American—American Foundry & Mfg. Co., St. Louis.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Eureka, Johnson, Rex, Saxon—J. D. Johnson Co.,  
 Philadelphia.  
 Exeter Brass Works, Exeter, N. H.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Hova—Haines, Jones & Cadbury Co., Philadelphia.  
 IXL Pump & Mfg. Co., The, Philadelphia, Pa.  
 Kappler Foundry Co., John C., St. Louis, Mo.  
 Madden's Patent—James B. Clow & Sons, Chicago,  
 Ill.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 Mueller Mfg. Co., H., Decatur, Ill.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Philadelphia—Haines, Jones & Cadbury Co., Philadel-  
 phia.  
 Powhatan Brass & Iron Works, Ranson, W. Va.  
 Richmond—Haines, Jones & Cadbury Co., Philadel-  
 phia.  
 Royal Brass Mfg. Co., Cleveland, O.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Savill's Patent—Thomas Savill & Sons, Philadelphia.  
 Selgrist—B. F. Selgrist, Buffalo, N. Y.  
 Star—Crampton-Farley Brass Co., Kansas City, Mo.  
 Steelton—Haines, Jones & Cadbury Co., Philadelphia.

**VALVES, ROSE.**

Allen Fire Department Supply Co., Providence, R. I.  
 American—American Valve Mfg. Co., Coxsackie, N. Y.  
 Belknap Mfg. Co., The, Bridgeport, Conn.  
 Boston Belting Corp., Boston, Mass.  
 Bowlus—The Bowlus Mfg. Co., Springfield, O.  
 Callahan Co., The, Cornelius, Boston, Mass.  
 California—American Foundry & Mfg. Co., St. Louis.  
 California Pattern—Schlangen Bros. Co., Chicago,  
 Ill.  
 Carlund Mfg. Co., New York, N. Y.  
 Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Chicago Pattern—American Foundry & Mfg. Co., St.  
 Louis, Mo.  
 Chicago, New York & California Patterns—Elkhart  
 Iron Works, Elkhart, Ind.  
 Chicago Pattern—Seattle Brass Co., Seattle, Wash.  
 Chicago Pattern—E. E. Sherman Mfg. Co., Battle  
 Creek, Mich.  
 Cline & Gilbert Co., New York, N. Y.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Eddy—Eddy Valve Co., Waterford, N. Y.

Fairbanks—The Fairbanks Co., New York, N. Y.  
 Fries & Co., Buffalo, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Hayward & Co., S. F., New York.  
 Ideal Water Saver—Gaylord Sanitary Mfg. Co., El  
 Dorado, Kans.

♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Jenkins Mfg. Co., New York, N. Y.  
 Jiffy—The Jiffy Fire Hose Rack Co., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lenticular—Kennedy Valve Mfg. Co., Elmira, N. Y.  
 Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
 ♦ Lunkenheimer Co., The, Cincinnati, O. (gate).  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Milwaukee Brass Mfg. Co., Milwaukee, Wis.  
 National—American Foundry & Mfg. Co., St. Louis, Mo.  
 Nelson Valve Co., The, Chestnut Hill, Philadelphia,  
 Pa.  
 Oberndorf Mfg. Co., Pittsburgh, Pa.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 ♦ Powell Co., The Wm., Cincinnati, O. (angle, gate,  
 globe, check, safety).  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Rensselaer—Rensselaer Valve Co., Troy, N. Y.  
 Schlangen Bros. Co., Chicago, Ill.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Seattle Brass Co., Seattle, Wash.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Underwriters' Approved—The Kennedy Valve Mfg.  
 Co., Elmira, N. Y. (gate, for use on "Underwriter"  
 fire pump).  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Western—American Foundry Mfg. Co., St. Louis, Mo.

**VALVES, HYDRANT.**

Allen Fire Department Supply Co., The, Providence.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Ashton Valve Co., Boston, Mass.  
 Boston Woven Hose & Rubber Co., Boston, Mass.  
 Callahan Co., The, Cornelius, Boston, Mass.  
 Chambersburg Engineering Co., Chambersburg, Pa.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Exeter Brass Works, Exeter, N. H.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Helms—B. Hoffman Mfg. Co., Milwaukee, Wis.  
 Hydraulic Press Mfg. Co., Mt. Gilead, O.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Larkin—Larkin Mfg. Co., Dayton, O.  
 Volkhart—Volkhart Co., Inc., Stapleton, N. Y.

**VALVES, HYDRAULIC.**

American—American Steam Gauge & Valve Mfg.  
 Co., Boston, Mass.  
 Critchlow—American Foundry & Construction Co.,  
 Pittsburg, Pa.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Defiance—Defiance Packless Valve Co., Chicago, Ill.  
 Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
 Elmes, Charles F., Engineering Works, Chicago, Ill.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Flower Valve Mfg. Co., Detroit, Mich.  
 Hennebelle Co., Chicago, Ill. (straightway, 3 way and  
 4 way).  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 Hydraulic Press Mfg. Co., The, Mount Gilead, O.  
 Jarecki Mfg. Co., Erie, Pa.  
 Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.  
 ♦ Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Metalwood Mfg. Co., Detroit, Mich.  
 Morgan Construction Co., Worcester, Mass.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Pittsburgh Valve Foundry & Construction Co., Pitts-  
 burgh, Pa.  
 Pneumercator—Pneumercator Co., Inc., New York,  
 N. Y.  
 ♦ Powell Co., The Wm., Cincinnati, O. (globe, angle and  
 cross).  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Reading Valve & Fittings Co., Reading, Pa. (Globes  
 and angles).  
 Protected Seat Valve Co., Pittsburgh, Pa.  
 Rensselaer Valve Co., Troy, N. Y.  
 Riggins—Watson & McDaniel Co., Philadelphia, Pa.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Schaeffer & Budenberg Mfg. Co., Brooklyn, N. Y.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Shriver—T. Shriver & Co., Harrison, N. J.  
 Toledo—Franklin Williams, Inc., New York, N. Y.  
 Trojan—Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Watson—Stillman Co., New York, N. Y.  
 ♦ Williams, D. T., Valve Co., The, Cincinnati, O.

**VALVES, HYDRAULICALLY OPERATED.**

Columbian Iron Works, Chattanooga, Tenn.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Hennebelle Co., Chicago, Ill.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York.  
 Kennedy Valve Mfg. Co., Elmira, N. Y.

Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.  
P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
Protected Seat Valve Co., Pittsburgh, Pa.  
Robertson—John F. Robertson Co., Pittsburgh, Pa.  
Schutte & Koerting Co., Philadelphia, Pa.  
Southwark Foundry & Machine Co., Philadelphia, Pa.

♦ Yarway-Caskey—Yarnall-Waring Co., Philadelphia, Pa.

#### VALVES, INDICATOR.

American—American Lubricator Co., Detroit, Mich.  
Bourbon Copper & Brass Works Co., Cincinnati, O.  
Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.

Corey—Rensselaer Mfg. Co., Troy, N. Y. (post).  
Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.  
Eddy—Eddy Valve Co., Waterford, N. Y. (post).  
Essex Brass Corp., Detroit, Mich.

Fairbanks—The Fairbanks Co., New York, N. Y.  
♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.

♦ Jenkins Bros., New York, N. Y.

♦ Kelly & Jones Co., The, Greensburg, Pa.

♦ Kennedy—The Kennedy Valve Mfg. Co., Elmira, N. Y.

♦ Ludlow Valve Mfg. Co., Troy, N. Y.

♦ Michigan—Scott Valve Mfg. Co., Detroit, Mich.

♦ Milwaukee Valve Co., Milwaukee, Wis.

♦ Monarch Valve & Mfg. Co., Warren, Mass.

♦ National—American Foundry & Mfg. Co., St. Louis, Mo.

♦ National Brass Mfg. Co., Rochester, N. Y.

♦ Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.

♦ Powell, Wm., Co., The, Cincinnati, O.

♦ Scott—Scott Valve Mfg. Co., Detroit, Mich.

♦ Underwriters—The Kennedy Valve Mfg. Co., Elmira, N. Y. (post).

♦ Victor—The Lunkenheimer Co., Cincinnati, O.

♦ Walworth Mfg. Co., Boston, Mass.

♦ Wood, R. D., & Co., Philadelphia, Pa.

#### VALVES, INLET.

Coffin—Coffin Valve Co., Boston, Mass.  
Gold—Gold Car Heating & Lighting Co., Brooklyn, N. Y.

#### VALVES AND FITTINGS, IRRIGATING.

American Foundry & Mfg. Co., St. Louis, Mo.  
Sacramento Pipe Works, Sacramento, Cal.  
Seattle Brass Co., Seattle, Wash.

#### VALVES, KNEE.

Tessmer Machine & Tool Co., Detroit, Mich.

#### VALVES, LAVATORY STOP.

(See "Cocks, Stop, Lavatory.")

#### VALVES, LEAD AND LEAD LINED.

Lead Lined Iron Pipe Co., Wakefield, Mass.  
Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
United Lead Co., New York, N. Y.  
United Lined Tube & Valve Co., Boston, Mass.

#### VALVES, LEATHER.

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.

♦ Bell, Andrew, Estate of, Newark, N. J.  
♦ Bonner & Barnswell, Inc., New York, N. Y.

♦ Chicago Rawhide Co., The, Chicago, Ill.

♦ Fairbanks—The Fairbanks Co., New York, N. Y.

♦ Judd & Leland Mfg. Co., Clifton Springs, N. Y.

♦ Kendrick Valve & Washer Co., Syracuse, N. Y.

♦ Marston, I. G., & Co., Boston, Mass.

♦ Norwich Belt Mfg. Co., Norwich, Conn.

♦ No. 55 Sherwood—Sherwood Brass Works, Detroit, Mich.

♦ Sutherland Co., F. L., Detroit, Mich.

♦ Vim—E. F. Houghton & Co., Philadelphia, Pa.

♦ Worthington Pump & Machinery Corp., New York, N. Y.

#### VALVES, LOCKING.

♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
♦ Monash-Younger Co., Chicago, Ill.

#### VALVES, MARINE.

Crosby Steam Gage & Valve Co., Boston, Mass.  
Defiance—Defiance Packless Valve Co., Chicago, Ill.  
Everlasting Valve Co., New York, N. Y.  
Scott—Scott Valve Mfg. Co., Detroit, Mich.

#### VALVES, MIXING.

Essex Brass Corp., Detroit, Mich.

#### VALVES, MONEL METAL.

Defiance—Defiance Packless Valve Co., Chicago, Ill.

#### VALVES, MOTORMAN'S OR AIR LIFT OPERATING.

National Brake & Electric Co., Milwaukee, Wis.

#### VALVES, MUD.

Coffin—Coffin Valve Co., Boston, Mass.  
Halliday—U. S. Wind Engine Co., Batavia, Ill.  
Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
P. & C.—Pratt & Cady Co., The, Hartford, Conn.

#### VALVES, NEEDLE.

Bertschy Engineering Co., Cedar Rapids, Ia.  
Brunner—Brunner Mfg. Co., Utica, N. Y.  
Buckeye Iron & Brass Works, Dayton, O.  
C. C.—Crane Co., Chicago, Ill.  
Detroit Brass & Malleable Works, Detroit, Mich.  
Eastwood—Eastwood Wire Mfg. Co., Belleville, N. J.  
Fleur De Lis—Boston Steam Specialty Co., Boston, Mass.

Kelly & Jones Co., The, Greensburg, Pa.

♦ Lunkenheimer Co., The, Cincinnati, O.

♦ McDonald Mfg. Co., A. Y., Dubuque, Ia.

♦ McNab & Harlin Mfg. Co., New York, N. Y.

♦ McKee & Roberts Co., The, Detroit, Mich.

♦ Milwaukee Valve Co., Milwaukee, Wis.

♦ Powell Co., The Wm., Cincinnati, O.

♦ Roberts Brass Mfg. Co., The, Detroit, Mich.

♦ Standard Brass Works, Detroit, Mich.

♦ The Dole—The Dole Valve Co., Chicago, Ill.

♦ United—United Brass Mfg. Co., Cleveland, O.

♦ Walworth Mfg. Co., Boston, Mass.

♦ Western Automatic Machine Screw Co., The, Elyria, Ohio.

#### VALVES, NIGGER.

Atwood & Jones—Atwood & Jones Mfg. Co., Stillwater, Minn.

#### VALVES, NON-RETURN AND EMERGENCY STOP.

Crane Co., Chicago, Ill.  
Davis, G. M., Regulator Co., Chicago, Ill. (Bludessline).  
Foster Engineering Co., Newark, N. J.  
Edwards Valve & Mfg. Co., Chicago, Ill.  
Ford—Ford Regulator Corp., New York, N. Y.  
Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.

Jenkins Bros., New York, N. Y.

Kelly Controller Co., Chicago, Ill.

Lagonda Mfg. Co., Springfield, O.

♦ Lunkenheimer Co., Cincinnati, O.

♦ Nelson Valve Co., Philadelphia, Pa.

♦ New Bedford Valve & Machine Co., New Bedford, Mass.

♦ Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.

♦ Schutte & Koerting Co., Philadelphia, Pa.

♦ Strong—Strong, Carlisle & Hammond Co., Cleveland, O.

#### VALVES, OFFSET.

Columbian Iron Works, Chattanooga, Tenn.  
Crane—Crane Co., Chicago, Ill.  
♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
♦ O-B—Ohio Brass Co., Mansfield, O.  
♦ Powell, Wm., Co., The, Cincinnati, O.  
♦ P. & C.—Pratt & Cady Co., The, Hartford, Conn.

#### VALVES, OIL.

Darling Valve & Mfg. Co., Williamsport, Pa.  
Defiance—Defiance Packless Valve Co., Chicago, Ill.  
Ernst—Ernst & Co., Newark, N. J.  
Eddy Valve Co., Waterford, N. Y.  
Equitherm Control Corp., Brooklyn, N. Y.  
Everlasting Valve Co., New York, N. Y.  
♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
♦ Kelly & Jones Co., The, Greensburg, Pa.  
♦ Kennedy Valve Mfg. Co., Elmira, N. Y.  
♦ Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.  
♦ McDonald Mfg. Co., A. Y., Dubuque, Iowa.  
♦ Powell, Wm., Co., The, Cincinnati, O.  
♦ Scott—Scott Valve Mfg. Co., Detroit, Mich.

#### VALVES, FOR OIL BURNING FURNACES.

Cornell & Underhill, New York, N. Y.  
♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
♦ Lalor Fuel Oil System Co., Baltimore, Md.  
♦ Powell—The Wm. Powell Co., Cincinnati, O.  
♦ Walworth Mfg. Co., Boston, Mass.  
Witt's—G. E. Witt Co., Inc., San Francisco, Cal.

#### VALVES, OILER.

Boss—Dixon Valve & Coupling Co., Philadelphia, Pa.  
Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.

#### VALVES, PEDAL, FOR LAVATORIES.

Edwardsville Brass Co., Edwardsville, Ill.  
Em Ess—The Meyer-Sniffen Co., New York, N. Y.  
Gaylord Sanitary Mfg. Co., Rochester, N. Y.

Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Ideal—C. T. Ham Mfg. Co., Rochester, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Speakman Co., Wilmington, Del.  
 Utica—Technical Equipment Co., New York, N. Y.

**VALVES, PISTON.**

American Balance Valve Co., Jersey Shore, Pa.  
 Stayman—The Cockburn Barrow & Machine Co., New York, N. Y.

**VALVES, PLUG.**

Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Cadman's Gato—A. W. Cadman Mfg. Co., Pittsburgh, Pa.  
 Coldwell-Wilcox Co., Newburgh, N. Y.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 Konold, M. J., Pittsburgh, Pa.  
 Nordstrom, Merco—Merrill Company, The, San Francisco, Calif.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.  
 Toledo—Franklin Williams, Inc., New York, N. Y.

**VALVES, PNEUMATIC TIRES & RUBBER AIR GOODS.**

Schrader Universal—Schraders, A. Sons, Inc., Brooklyn, N. Y.

**VALVES, POP SAFETY.**

Acton, John, Brooklyn, N. Y.  
 ♦ American Board of Trade, American Special—American Steam Gauge & Valve Mfg. Co., Boston, Mass.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Capitol Brass Works, Detroit, Mich.  
 Crane—Crane Co., Chicago, Ill.  
 Crosby—Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 ♦ Edward—Edward Valve & Mfg. Co., East Chicago, Ind.  
 Garratt, W. T. & Co., Inc., San Francisco, Cal.  
 Gold—Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
 Illinois Engineering Co., Chicago, Ill.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kunkle—Kunkle Valve Co., Fort Wayne, Ind.  
 Loneragan, J. E., Co., Philadelphia, Pa.  
 McCarthy Drill & Tool Corp., Toledo, O.  
 ♦ McEae & Roberts Co., Detroit, Mich.  
 ♦ Midget Alert (Lloyd Pattern)—Lunkenheimer Co., The, Cincinnati, O.  
 Norwall—American Radiator Co., Chicago, Ill.  
 ♦ Powell Co., The Wm., Cincinnati, O.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 ♦ Sentinel—The Lunkenheimer Co., Cincinnati, O.  
 Smolensky Safety—The Smolensky Valve Co., Cleveland, O.  
 ♦ Twin—The Lunkenheimer Co., Cincinnati, O.  
 United States Gauge Co., New York, N. Y.  
 Utica—Technical Equipment Co., New York, N. Y.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.

**VALVES, PRESSURE REDUCING AND REGULATING.**

(See also "Regulators, Pressure.")

Acton—John Acton, Brooklyn, N. Y.  
 Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Asbell—S. J. Asbell Co., Paterson, N. J.  
 Atlas—Atlas Valve Co., New York, N. Y.  
 Atlas—Hall Mfg. Co., Harrison, N. J.  
 Auld Co., Philadelphia, Pa.  
 Beats All, New Era, Old Reliable—Locke Regulator Co., Salem, Mass.  
 Belfield Co., H., Philadelphia, Pa.  
 Boston Steam Specialty Co., Boston, Mass. (gas).  
 Boylston—Boylston Steam Specialty Co., Chicago, Ill.  
 Bridgman Bros. Co., Philadelphia, Pa.  
 Cash Standard—A. W. Cash Co., Decatur, Ill.  
 Climax—Hughson Steam Specialty Co., Chicago, Ill.  
 Crane Co., Chicago, Ill.  
 Crook, H. E., Co., Inc., Baltimore, Md.  
 Curtis—Julian d'Este Co., Boston, Mass.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 Defender Automatic Regulator Co., St. Louis, Mo.  
 Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
 Fellpse—Illinois Engineering Co., Chicago, Ill.  
 Edward—Edward Valve & Mfg. Co., The, East Chicago, Ind.  
 ♦ Empire—Kelly & Jones Co., The, Greensburg, Pa.  
 Figure 98—Boylston Steam Specialty Co., Chicago, Ill.  
 ♦ Fisher—The Fisher Governor Co., Chicago, Ill.  
 Fleur de Lis—Boston Steam Specialty Co., Boston.  
 Ford—Ford Regulator Corp., New York, N. Y.  
 Ford—Colles Heater & Specialty Co., Chicago, Ill.  
 Foster—American District Steam Co., North Tona-wanda, N. Y.

♦ Foster—Walworth Mfg. Co., Boston, Mass.  
 Fulton—Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.  
 Garrett, W. D., & Co., New York.  
 Gold—Gold Car Heating & Lighting Co., New York, N. Y.  
 Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Harlem Mfg. Co., New York, N. Y.  
 Hennebohle Co., Chicago, Ill.  
 Hughson—Illinois Engineering Co., Chicago, Ill.  
 Hydromatic—The Engineers Appliance Co., Cleveland, O.  
 Ideal Automatic Governor Co., Inc., Newark, N. J.  
 Improved—Julian d'Este Co., Boston, Mass.  
 International Oxygen Co., Newark, N. J.  
 Johnson—Johnson Service Co., Milwaukee, Wis.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Knapp Bros. Mfg. Co., Chicago, Ill.  
 K & T—Kilpfel Mfg. Co., Chicago, Ill.  
 K. V.—Max Machine Co., Clinton, Mass.  
 Lalor Fuel Oil System Co., Baltimore, Md.  
 Leslie Co., Lyndhurst, N. J.  
 Lewis Steam Specialty & Valve Co., Philadelphia, Pa.  
 Lytton—Lytton Mfg. Corp., Franklin, Va.  
 ♦ Mason—Mason Regulator Co., Boston, Mass.  
 McAlear Mfg. Co., Chicago, Ill.  
 McDonald Co., A. Y., Dubuque, Ia.  
 Moline Heat, Moline, Ill.  
 Monash—Monash-Younger Co., Chicago, Ill.  
 Nageldinger, J., & Son, Inc., New York, N. Y.  
 National Regulator Co., Chicago, Ill.  
 New Era, Old Reliable—Locke Regulator Co., Salem, Mass.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Perfection—American District Steam Co., N. Tona-wanda, N. Y.  
 Pilot—Boylston Steam Specialty Co., Chicago, Ill.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 Powers—The Powers Regulator Co., Chicago, Ill.  
 Ross Valve Mfg. Co., Inc., Troy, N. Y.  
 Ruggles-Klingemann Mfg. Co., Salem, Mass. (marine type).  
 S. C.—S. C. Regulator Mfg. Co., Fostoria, O.  
 Schade—Schade Valve Mfg. Co., Philadelphia, Pa.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Simplex—G. E. Witt Co., Inc., San Francisco, Cal.  
 Squires Genuine—The C. E. Squires Co., Cleveland, Ohio.  
 Star—American District Steam Co., North Tona-wanda, N. Y.  
 Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.  
 Sylphon—Fulton Co., The, Knoxville, Tenn.  
 Tag—C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.  
 Trojan—Ross Valve Mfg. Co., Troy, N. Y.  
 Try-Me—Try Me Mfg. Co., Westfield, Mass.  
 Tyco—Taylor Instrument Companies, Rochester, N. Y.  
 Quitette-Ault—Schutte & Koerting Co., Philadelphia, Pa.  
 Union Water Meter Co., Worcester, Mass.  
 Utility—Standard Steam Specialty Co., New York.  
 V & K—Vail & Kimes, Dayton, O.  
 Waters—Waters Governor Co., Boston, Mass.  
 Watson—Watson & McDaniel Co., Philadelphia, Pa.  
 Watson-Stillman Co., New York, N. Y.  
 Watts Regulator Co., Lawrence, Mass.  
 Witt's—G. E. Witt Co., Inc., San Francisco, Cal.

**VALVES, PUMP, LEATHER, RUBBER, FIBRE AND COMPOSITION.**

Albion—Albion Mfg. Co., Seattle, Wash.  
 Algeo—Auburn Leather Goods Co., Auburn, N. Y.  
 American Safety Lamp & Mine Supply Co., Scranton, Pa.  
 American Vulcanized Fibre Co., Wilmington, Del.  
 American—The American Well Works, Aurora, Ill.  
 Bailey—The Mutual Supply Co., Newark, N. J.  
 ♦ Belmont—Belmont Packing & Rubber Co., Philadelphia, Pa.  
 Berger Bros. Co., Philadelphia, Pa.  
 Birch—Birch Pump Valve Mfg. Co., Chicago, Ill.  
 Boston Belting Corp., Boston, Mass.  
 Bramden—Crosby Steam Gauge & Valve Co., Boston.  
 Brandt's—Randolph Brandt, New York, N. Y.  
 Buffalo Weaving & Belting Co., Buffalo, N. Y.  
 Canfield—H. O. Canfield Co., The, Bridgeport, Conn.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Cincinnati Gasket & Packing Co., Cincinnati, O.  
 ♦ Combination—The Combination Rubber Mfg. Co., Bloomfield, N. J.  
 Continental Fibre Co., Newark, Del.  
 Cook, A. D., Lawrenceburg, Ind.  
 C. O. P.—The Strong Machinery & Supply Co., New York, N. Y.  
 Crandall's—Crandall Packing Co., Palmyra, N. Y.  
 Darcoid—Dominion Asbestos & Rubber Corp., New York, N. Y.  
 Darling Valve & Mfg. Co., Williamsport, Pa.  
 Delaware Hard Fibre Co., Marshallton, Del.  
 Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.

Diamond Rubber Co., Inc., Akron, O. Trade names—Anthracite, Defiance, Sphinx, Python, Huron, Crescent, Star, Rex, Elk, Erie, High Service, Lion, Equator, Luzerne, Ajax, Portage, Arctic.

♦ Dick Valve—R. & J. Dick Co., Inc., Passaic, N. J.

Double Service—Double Service Packing Co., Philadelphia, Pa.

Elkhart Rubber Works, Elkhart, Ind.

Empire Rubber & Tire Co., Trenton, N. J.

Essex—Essex Rubber Co., Trenton, N. J.

Evans, John E., Nutley, N. J.

Excelsior—Excelsior Valve Co., New York, N. Y.

Federalite, Indurate—Federal Metallic Packing Co., Boston, Mass.

♦ Fidelity—Cincinnati Rubber Mfg. Co., The, Cincinnati, O.

Gasolia—The Strong Machinery & Supply Co., New York, N. Y.

♦ General Asbestos & Rubber Co., Charleston, S. C.

♦ Goodrich—The B. F. Goodrich Rubber Co., Akron, O.

♦ Goodyear Tire & Rubber Co., Akron, O.

Gutta Percha & Rubber Mfg. Co., New York, N. Y.

Haigh's Pat.—Chandler Pump Co., Cedar Rapids, Ia.

Hamilton Rubber Mfg. Co., Trenton, N. J.

Hayes Pump & Planter Co., Galva, Ill.

Hendrie, W. C., Rubber Co., Torrance, Cal.

Hewitt Rubber Co., Buffalo, N. Y.

Hill—The Hill Pump Valve Co., Chicago, Ill.

Hudson Mechanical Rubber Co., New York, N. Y.

Humphreys Mfg. Co., The, Mansfield, O.

Ideal—Lake Erie Manfg. Co., Inc., Buffalo, N. Y.

Indian Rubber & Insulated Wire Co., Jonesboro, Ind.

♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.

Johnson Co., The, Henry, Jersey City, N. J.

J. R.—Jerome Rothenbuecher Valve Co., Chicago, Ill.

Keystone—Keystone Leather Packing Co., Auburn, N. Y.

Kinghorn—L. J. Rebele, New York, N. Y. (metallic).

Kinghorn—U. S. Indestructible Gasket Co., New York, N. Y.

Kinkhorn—John F. Robertson Co., Pittsburgh, Pa.

Knowlton Rubber Co., Geo. W., Boston, Mass.

K. V.—Max Machine Co., Clinton, Mass.

La Favorite Rubber Mfg. Co., Paterson, N. J.

Liberty Mfg. Co., The, East Norwalk, Conn.

Lubron—Knowlton Packing Co., Inc., Newtonville, Mass.

McDonald Mfg. Co., A. Y., Dubuque, Ia.

Maquire Rubber Co., New York, N. Y.

Marston & Co., I. G., Boston, Mass.

Max—Ams Max Machine Co., Clinton, Mass.

♦ Marco—Mechanical Rubber Co., The, Cleveland, O.

Mulconroy Co., Inc., Philadelphia, Pa.

Multiplex Metallic—John F. Robertson Co., Pittsburgh, Pa.

♦ N. B. O.—Home Rubber Co., Trenton, N. J.

♦ New York Belting & Packing Co., The, New York.

Nichols Perfection—S. R. Drum Mfg. Co., Chicago, Ill.

Norborn—Norborn Engineering Co., Philadelphia, Pa.

♦ Page Belting Co., Concord, N. H.

Peck, Geo. F., Mfg. Co., Chelsea, Mass.

Pennsylvania Rubber Co., The, Jeanette, Pa.

Perfection—Lake Erie Mfg. Co., Inc., Buffalo, N. Y.

Philkob—James I. Brown, New York, N. Y.

Pilley's—Pilley Packing & Fine Brush Mfg. Co., St. Louis, Mo.

Pioneer Rubber Mills, San Francisco, Calif.

♦ Republic Rubber Co., The, Youngstown, O.

Richardson-Phenix Co., Milwaukee, Wis.

Right—Standard Gasket Co., Inc., Philadelphia, Pa.

♦ Rub-Steel—Voorhees Rubber Mfg. Co., Jersey City, N. J.

Sallsbury, W. H., & Co., Chicago, Ill.

Schacht Rubber Mfg. Co., Huntingdon, Ind.

Schade Valve Mfg. Co., Philadelphia, Pa.

♦ Sherman Mfg. Co., E. B., Battle Creek, Mich.

Standard Fibre Co., Somerville, Mass.

Tauril—Anchor Packing Co., The, Philadelphia, Pa.

Tribune—Continental Rubber Works, Erie, Pa.

Tri-Disc—J. C. Edgecombe & Co., New York, N. Y.

Union Rubber & Asbestos Co., Trenton, N. J.

United & Globe Rubber Mfg. Co., Trenton, N. J.

♦ United States Rubber Co., Mechanical Goods Div., New York, N. Y.

Victor—Victor Balata & Textile Belting Co., New York.

♦ Voorhees Rubber Mfg. Co., Jersey City, N. J.

Vulcabeston—Johns-Pratt Co., The, Hartford, Conn.

♦ Vulcabeston—Johns-Manville, Inc., New York, N. Y.

Western Rubber Co., Goshen, Ind.

Whitehead Bros. Rubber Co., Trenton, N. J.

Williams-Bowman Rubber Co., The, Chicago, Ill.

Wise & Bailey, Philadelphia, Pa.

Wisold—Consolidated Packing & Supply Co., New York, N. Y.

Wolverine Brass Works, Grand Rapids, Mich.

Woodward-Wanger Co., Philadelphia, Pa.

#### VALVES, PUMP REGULATING.

Curtis—Julian d'Este Co., Boston, Mass.

♦ Fisher Governor Co., The, Chicago, Ill.

Ford—Ford Regulator Corp., New York, N. Y.

Kieley & Mueller, New York, N. Y.

McNab & Harlin Mfg. Co., New York, N. Y.

♦ Walworth Mfg. Co., Boston, Mass.

Watson—Watson & McDaniel Co., Philadelphia, Pa.

#### VALVES, QUARTER-TURN.

Gorton & Lidgerwood Co., New York, N. Y.

♦ Homestead Valve Mfg. Co., Homestead, Pa.

#### VALVES, QUICK OPENING AND CLOSING (LEVER).

Crane—Crane Co., Chicago, Ill.

Commonwealth Brass Corp., Detroit, Mich.

Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.

Dayton—Dayton Supply Co., Dayton, O.

Fairbanks—The Fairbanks Co., New York, N. Y.

Gorton & Lidgerwood Co., New York, N. Y.

Gwynn—The Gwynn Engineering Co., Pittsburgh, Pa.

Hammond Brass Works, Hammond, Ind.

♦ Handy, Victor—The Lunkenheimer Co., Cincinnati, O.

♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.

♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.

♦ Kelly & Jones Co., The, Pittsburgh, Pa.

Kennedy Valve Mfg. Co., The, Elmira, N. Y.

♦ Ludlow—The Ludlow Valve Mfg. Co., Troy, N. Y.

McNab & Harlin Mfg. Co., New York, N. Y.

Nelson Valve Co., The, Chestnut Hill, Philadelphia, Pa.

Pittsburgh Valve & Fittings Co., Barberton, O.

Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.

♦ Powell Co., The Wm., Cincinnati, O.

P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.

Sandy Hill Iron & Brass Works, Hudson Falls, N. Y.

Scott—Scott Valve Mfg. Co., Detroit, Mich.

Standard Spiral Pipe Works, Chicago, Ill.

Strong's—The Strong, Carlisle & Hammond Co., Cleveland, O.

Union Water Meter Co., Worcester, Mass.

♦ Walworth Mfg. Co., Boston, Mass.

#### VALVES, RADIATOR, AIR, AUTOMATIC.

Acme—Jas. P. Marsh & Co., Chicago, Ill.

American Fin Co., Waterbury, Conn.

American—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.

Allen—American Radiator Co., Chicago, Ill.

Arco—American Radiator Co., Chicago, Ill.

Autavent—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.

Automatic—W. A. Russell & Co., New York, N. Y.

B. & O.—The Beaton & Corbin Mfg. Co., Southington, Conn.

Ball Joint, Jr.—The Penn Engineering Co., Philadelphia, Pa. (float).

Ball Joint Royal—The Penn Engineering Co., Philadelphia, Pa.

Beaton & Corbin Mfg. Co., Southington, Conn.

Beaton & Cadwell Mfg. Co., New Britain, Conn.

Bishop & Babcock Co., The, Cleveland, O.

Breckenridge—The H. B. Smith Mfg. Co., Westfield, Mass.

Buckeye Iron & Brass Works, Dayton, O.

Capitol—U. S. Radiator Corp., Detroit, Mich.

Cenco—C. Erwin Norman & Co., Chicago, Ill.

Chapman—The Chapman Steam Specialty Co., Canton, O.

Comet—Phelps Bros. Co., New York, N. Y.

Crane—Crane Co., Chicago, Ill.

Crecent—Phelps Bros. Co., New York, N. Y.

Defiance—Defiance Packless Valve Co., Chicago, Ill.

Durham Auto-Vac—Imperial Brass Mfg. Co., Chicago.

Elmo, Elmo, Jr.—Phelps Bros. Co., New York, N. Y.

Foxboro Co., Inc., The, Foxboro, Mass.

Gem—Beaton & Cadwell Mfg. Co., New Britain, Conn.

Hoffman—Hoffman Specialty Co., Waterbury, Conn.

Ideal Syphon—American Radiator Co., Chicago, Ill.

Illinois—Jas. P. Marsh & Co., Chicago, Ill.

Jalexam—John A. Murray & Co., New York.

Jenkins Bros., New York, N. Y.

Kelly—Kelly Brass Works, Chicago, Ill.

King—King Construction Co., North Tonawanda, N. Y.

Koalsave—Koalsave Vacuum Valve Co., New York, N. Y.

Leicester—Jas. P. Marsh & Co., Chicago, Ill.

Mackay—Mackay Mfg. Co., Newark, N. J.

Mages Valve Co., The, New York.

Jumbo, Jumbo Gem, Jumbo Special, Jumbo Water Seal.

Manhattan—Harlem Mfg. Co., New York, N. Y.

Marsh's Original Paul—Jas. P. Marsh & Co., Chicago.

Marsh-Paul—Jas. P. Marsh & Co., Chicago, Ill.

McAlear Thermo Vent—McAlear Mfg. Co., Chicago, Ill.

♦ Michigan—Michigan Lubricator Co., Detroit, Mich.

Monash-Younger Co., Chicago, Ill.

Trade names—Atlas Syphon, Badge, Midget, Mo-Va-Co-Monash, Monash Paul, Monash Radifier, Monash Thermostatic, Monash Four-Way-Drain, Monash Telwan, Mo-Yo-Co, M-Y-C, Noxall, Noxall Syphon, Perfected Duplex, Re-New-Pa, Star, Syphon.

Norwall-Siphon—American Radiator Co., Chicago, Ill.

Noxall Syphon—Monash-Younger Co., Chicago, Ill.

# COMMONWEALTH BRASS CORPORATION

DETROIT, MICHIGAN

Manufacturers of a full line of Standard Steam and Hot Water Radiator Valves, as well as the

## LAVIGNE Packless Quick-Opening STEAM RADIATOR VALVES

These Packless valves comply with every possible prescription for a first class radiator valve. They do not leak air, water, or steam; positively open and close with but  $\frac{1}{8}$  of a turn and are strongly made and handsomely finished. Made in six sizes, many styles of handles.



Standard Water Valve



Packless Valve Wood Wheel

**BUILT RIGHT—TO STAY TIGHT**

Pacific—Jas. P. Marsh & Co., Chicago, Ill.  
Peck, Cassius C., Rochester, N. Y.  
Peco, Penn. Fenn. Jr.—The Penn Engineering Co., Philadelphia, Pa.  
Thermodisk—Marsh & Co., Jas. P., Chicago, Ill.  
Trane Co., The, La Crosse, Wis.  
Triton—U. S. Radiator Corp., Detroit, Mich.  
Vento—Wm. S. Haines Co., Philadelphia, Pa.  
♦ Walworth Mfg. Co., Boston, Mass.

### VALVES, RADIATOR, AIR, POSITIVE, KEY AND WOOD WHEEL.

Ansonia Mfg. Co., Ansonia, Conn.  
Automatic—W. A. Russell & Co., New York, N. Y.  
Badger—L. J. Mueller Furnace Co., Milwaukee, Wis.  
Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Belknap Mfg. Co., Bridgeport, Conn.  
Bemanco—A. J. Beaton Mfg. Co., New Britain, Conn.  
Bishop & Babcock Co., The, Cleveland, O.  
Buckeye Iron & Brass Works, Dayton, O.  
Cenco—C. Erwin Norman & Co., Chicago, Ill.  
Coin—American Pin Co., Waterbury, Conn.  
Comet—Phelps Bros. Co., New York.  
Commonwealth Brass Corp., Detroit, Mich.  
Detroit Brass & Malleable Works, Detroit, Mich.  
♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
Dole—The Dole Valve Co., Chicago, Ill.  
Flush—Mechanicsville Specialty Sup. Mfg. Co., Mechanicsville, N. Y.  
Frederick-Elder Co., The, Bridgeville, Pa.  
Gem, Jumbo—Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Harlem—Harlem Mfg. Co., New York, N. Y.  
Industrial Instrument Co., Foxboro, Mass.  
Jumbo—The Magee Valve Co., New York, N. Y.  
Kelly—Kelly Brass Works, Chicago, Ill.  
Kelly & Jones Co., The, Greensburg, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Manhattan—Harlem Mfg. Co., New York, N. Y.  
Manhattan Drain—Harlem Mfg. Co., New York, N. Y.  
Monash-Younger Co., Chicago, Ill.  
New Royal—Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y.  
O'Brien Vacuum Co., Butte, Mont.  
Perfecto—E. Edelman & Co., Chicago, Ill.  
Phelps Heating Specialty Co., New York, N. Y.  
Presto—Phelps Brothers Co., New York, N. Y.  
Russell's Perfect—W. A. Russell & Co., New York, N. Y.  
Simmons Co., John, New York, N. Y.  
Thermodisk—Jas. P. Marsh & Co., Chicago, Ill.  
O'Meara's Pa—J. O'Meara, Inc., New York, N. Y.  
Penn—The Penn Engineering Co., Philadelphia, Pa.  
Perkes Co., Charles, Philadelphia, Pa.  
♦ Powell, Wm., Co., The, Cincinnati, O.  
Pneu-vent—Pierce, Butler & Pierce Mfg. Co., New York, N. Y.  
Roberts Brass Mfg. Co., The, Detroit, Mich.  
Russell Improved, Russell Hexagon Body, Russell Old Style—W. A. Russell Co., New York, N. Y.  
Simmons Co., John, New York, N. Y.  
♦ Sterling & Skinner Mfg. Co., Detroit, Mich.

### VALVES, RADIATOR, CORNER.

Eureka Brass Works, Inc., Cincinnati, O.

### VALVES, RADIATOR, GRADUATED, MODULATING.

AdSCO—American District Steam Co., N. Tonawanda, N. Y.  
Bishop & Babcock Co., The, Cleveland, O.  
Boston—Johnson Vapor Heating Co., Boston, Mass.  
Commonwealth Brass Corp., Detroit, Mich.  
Crane Co., Chicago, Ill.  
♦ Detroit Multiport Vapor—Detroit Lubricator Co., Detroit, Mich.  
Gorton & Lidgerwood Co., New York, N. Y.  
H. S. Co.—Haynes Selling Co., Philadelphia, Pa.  
Illinois Engineering Co., Chicago, Ill.

♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
McAlear—McAlear Mfg. Co., Chicago, Ill.  
Milwaukee Valve Co., Milwaukee, Wis.  
♦ Monash, Monash Modulating—Monash-Younger Co., Chicago, Ill.  
Mouat—Mouat-Squires Co., Cleveland, O.  
Sandusky Packless Valve Co., The, Sandusky, O.  
Security—J. D. Johnson Co., Philadelphia, Pa.  
Sterling—Sterling Engineering Co., Milwaukee, Wis.  
Syracuse Faucet & Valve Co., Syracuse, N. Y.  
Thermograde Valve Co., Boston, Mass.  
Trane Co., The, La Crosse, Wis.  
Webster—Warren Webster & Co., Camden, N. J.

### VALVES, RADIATOR, HOT WATER.

Belknap Mfg. Co., Bridgeport, Conn.  
Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Capitol Brass Works, Detroit, Mich.  
Commonwealth Brass Corp., Detroit, Mich.  
Continental—Continental Radiator & Foundry Co., St. Louis, Mo.  
Crane—Crane Co., Chicago, Ill.  
Defiance—Defiance Packless Valve Co., Chicago, Ill.  
Detroit Brass & Malleable Works, Detroit, Mich.  
♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
Eureka—Eureka Brass Works, Inc., Cincinnati, O.  
Fairbanks—The Fairbanks Co., New York, N. Y.  
Hammond—Hammond Brass Works, Hammond, Ind.  
♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Inbraco—Indiana Brass Co., Frankfort, Ind.  
♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
Jumbo—The Magee Valve Co., New York, N. Y.  
Kelly & Jones Co., The, Greensburg, Pa.  
Kennedy Valve Mfg. Co., Elmira, N. Y.  
♦ Lunkenheimer Co., Cincinnati, O.  
Marsh—Marsh Valve Co., Erie, Pa.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Monash Packless—Monash-Younger Co., Chicago, Ill.  
♦ O-B—Ohio Brass Co., Mansfield, O.  
O'Meara's Pat.—J. O'Meara, Inc., New York, N. Y.  
Pierce, Butler & Pierce Mfg. Corp., Valve & Gauge Div., New York.  
Phelps Heating Specialty Co., New York, N. Y.  
Perfect Duplex—Monash-Younger Co., Chicago.  
Milwaukee Valve Co., Milwaukee, Wis.  
Sandusky Packless Valve Co., The, Sandusky, O.  
Scott—Scott Valve Mfg. Co., Detroit, Mich.  
Sylphon—The Fulton Co., Knoxville, Tenn.  
Syracuse—Syracuse Faucet & Valve Co., Syracuse, N. Y.  
Union Radiator Co., Johnstown, Pa.  
Unique—Honeywell Heating Specialty Co., Wabash, Ind.  
♦ Walworth Mfg. Co., Boston, Mass.

### VALVES, RADIATOR, LOCKSHIELD.

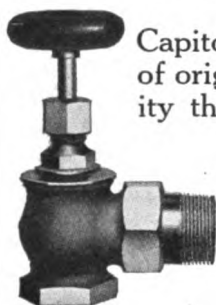
(See "Valves, Radiator, Hot Water" and "Steam," and "Valves, Globe, Lockshield.")

### VALVES, RADIATOR, PACKLESS.

Bishop & Babcock Co., The, Cleveland, O.  
Defiance—Defiance Packless Valve Co., Chicago, Ill.  
♦ Detroit Multiport—Detroit Lubricator Co., Detroit, Mich.  
Dole—The Dole Valve Co., Chicago, Ill.  
Dunham, C. A., Co., Inc., Chicago, Ill.  
Gold—Gold Car Heating & Lighting Co., Brooklyn, N. Y.  
Gorton & Lidgerwood Co., New York, N. Y.  
Hutchison—Hutchison Vapor Heating Corp., Herndon, Va.  
Lavigne—Commonwealth Brass Corp., Detroit, Mich.  
Marsh—Marsh Valve Co., Erie, Pa.  
McAlear—McAlear Mfg. Co., The, Chicago, Ill.  
Monash, Monash Modulating—Monash-Younger Co., Chicago, Ill.



# CAPITOL Products Always Satisfy



Capitol Radiator Valves are of original design with quality the predominant factor.

Highest grade of workmanship, coupled with rigid inspection, assures users of Capitol Brass Valves maximum of service and satisfaction. All valves tested to 125 lbs. hydraulic pressure.

Capitol Gauges are always accurate and reliable, and not affected by climatic conditions.

*Catalogue on request.*

**Capitol Brass Works**  
Detroit, Mich.

The Capitol Line includes Radiator Valves, Globe Valves, Gate Valves, Pop Valves, Union Elbows, Pressure Gauges, Water Gauges, Expansion Tank Gauges, Altitude and Vacuum Gauges, Basin Cocks, Bath Cocks, Sink Bibbs, etc.

O. E.—Milwaukee Air Power Pump Co., Milwaukee, Wis.  
Pierce Butler and Pierce Mfg. Corp., Syracuse, N. Y.  
Sandusky Packless Valve Co., Sandusky, O.  
Smolensky—The Smolensky Valve Co., Cleveland, O.  
Sylphon—Fulton Co., The, Knoxville, Tenn.  
Triton—U. S. Radiator Corp., Detroit, Mich.  
Vapor Regulator Co., Philadelphia, Pa.

## VALVES, RADIATOR, STEAM.

AdSCO—American District Steam Co., N. Tonawanda, N. Y.  
American—American Valve Co., Coxsack, N. Y.  
Beaton & Cadwell Mfg. Co., New Britain, Conn.  
Bashlin—The Bashlin Co., Warren, Pa.  
Belknap—Belknap Mfg. Co., The, Bridgeport, Conn.  
Bishop & Babcock Co., The, Cleveland, O.  
Buckeye Iron & Brass Works, Dayton, O.  
Capitol Brass Works, Detroit, Mich.  
Carbon—The Canton Brass & Machine Co., Canton, O.  
❖ Collis—Jenkins Bros., New York, N. Y.  
Commonwealth Brass Corp., Detroit, Mich.  
Crane—Crane Co., Chicago, Ill.  
Crescent—Crescent Mfg. Co., Scottsdale, Pa.  
❖ Crescent—The Wm. Powell Co., Cincinnati, O.  
Defiance—Defiance Packless Valve Co., Chicago, Ill.  
Detroit Brass & Malleable Works, Detroit, Mich.  
❖ Detroit—Detroit Lubricator Co., Detroit, Mich.  
Detroit—American Radiator Co., Chicago, Ill.  
Doody Vapor Heating Co., Inc., Boston, Mass.  
Eureka—Eureka Brass Works, Inc., Cincinnati, O.  
Fairbanks—The Fairbanks Co., New York, N. Y.  
Garratt, W. T., & Co., Inc., San Francisco, Cal.  
Gorton—Gorton & Lidgerwood Co., New York, N. Y.  
Hammond—Hammond Brass Works, Hammond, Ind.  
Haydenville Co., The, Haydenville, Mass.  
Ideal—L. W. Dukesheim Htg. & Ventilating Co., Oshkosh, Wis.  
Inbraco—Indiana Brass Co., The, Frankfort, Ind.  
❖ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
❖ Johns-Manville, Incorporated, New York, N. Y.  
Jumbo—Magee Valve Co., The, New York.  
❖ Kelly & Jones Co., The, Greensburg, Pa.  
❖ Kennedy—Kennedy Valve Mfg. Co., Elmira, N. Y.  
K. M.—Kinsey & Mahler Co., Peoria, Ill.  
Lukomski—Lukomski Brothers Co., Detroit, Mich.  
❖ Lunkenheimer Co., The, Cincinnati, O.  
Marsh—Marsh Valve Co., Erie, Pa.  
McDonald—McDonald Under-Seat Valve Co., Cleveland, O.

❖ McRae & Roberts Co., The, Detroit, Mich.  
McNab & Harlin Mfg. Co., New York, N. Y.  
Marsh—Jas. P. Marsh & Co., Chicago, Ill.  
Mercury Seal—Vacuum Heating Co., Philadelphia.  
❖ Michigan—Scott Valve Mfg. Co., Detroit, Mich.  
Milwaukee Valve Co., Milwaukee, Wis.  
Modulating—The Rado Co., Milwaukee, Wis.  
Monash-Younger Co., Chicago, Ill.  
❖ Multi Port—Detroit Lubricator Co., Detroit, Mich.  
Norwall Packless—American Radiator Co., Chicago.  
❖ O-B—Ohio Brass Co., Mansfield, O.  
O. I. Co.—Ohio Injector Co., Wadsworth, Ohio.  
❖ Penn—The Penn Engineering Co., Philadelphia, Pa.  
Perkes, Chas., Co., Philadelphia, Pa.  
❖ Phelco—Phelps Bros. Co., New York, N. Y.  
Pierce, Butler & Pierce Mfg. Corp., Valve & Gauge Div., Syracuse, N. Y.  
P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
Quintuple—Vapor Heating Co., Philadelphia, Pa.  
Sandusky Packless Valve Co., The, Sandusky, O.  
❖ Scott—Scott Valve Mfg. Co., Detroit, Mich.  
Simmons Co., John, New York, N. Y.  
Simplex—Simplex Valve & Meter Co., Philadelphia, Pa.  
Stickle—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
Thermograde—Thermograde Valve Co., Boston, Mass.  
Triton—U. S. Radiator Corp., Detroit, Mich.  
❖ Union—The Wm. Powell Co., Cincinnati, O.  
Union Radiator Co., Johnstown, Pa.  
❖ Universal Jewell—The Kelly & Jones Co., Greensburg, Pa.  
Utica Valve Fixture Co., Utica, N. Y.  
❖ Walworth Mfg. Co., Boston, Mass.  
❖ White Star—The Wm. Powell Co., Cincinnati, O.  
Wiley Calibrating—Simplex Heating Specialty Co., Lynchburg, Va.

## VALVES, RADIATOR, STEEL.

❖ Powell, The, Wm., Co., Cincinnati, O.

## VALVES, RECEIVING TANK REGULATING.

❖ Fisher Governor Co., Inc., Chicago, Ill.

## VALVES, REFLEX, BRASS.

Edna Brass Mfg. Co., The, Cincinnati, Ohio.

## VALVES, REGRINDING.

(See also "Valves, Globe, Regrinding.")

Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
National Tube Co., Pittsburgh, Pa.  
Nelson Valve Co., Philadelphia, Pa.  
❖ Powell, Wm., Co., The, Cincinnati, O.  
Richardson-Phenix Co., Milwaukee, Wis.  
❖ Walworth Kewanee—Walworth Mfg. Co., Boston, Mass.

## VALVES, RELIEF.

Acton—John Acton, Brooklyn, N. Y. (oil, water, sugar, etc.)  
❖ American—American Steam Gauge & Valve Co., Boston, Mass.  
Ashton—The Ashton Valve Co., Boston, Mass.  
Bishop & Babcock Co., Cleveland, O.  
Blake—The Geo. F. Blake Mfg. Co., New York, N. Y.  
Boston Steam Specialty Co., Boston, Mass.  
Buckeye Iron & Brass Works, Dayton, O.  
Callahan—The Cornelius Callahan Co., Boston, Mass.  
Cash Co., A. W., Decatur, Ill.  
Clark, H. W., Co., Mattoon, Ill.  
Cochrane—Harrison Safety Steam Boiler Co., Philadelphia, Pa.  
Consolidated—The Consolidated Safety Valve Co., New York, N. Y.  
Crane—Crane Co., Chicago, Ill.  
Crosby Steam Gauge & Valve Co., Boston, Mass.  
Curtis—Julian d'Este Co., Boston, Mass.  
Davis—G. M. Davis Regulator Co., Chicago, Ill.  
Donnelly Mfg. Co., Boston, Mass. (hot water).  
Dunham—C. A. Dunham Co., Inc., Chicago, Ill.  
Duro—Burnett-Larsh Mfg. Co., Dayton, O.  
❖ Elliott—Elliott Co., Pittsburgh, Pa. (atmospheric).  
Exeter Brass Works, Exeter, N. H.  
Fairbanks—The Fairbanks Co., New York, N. Y.  
❖ Fisher Governor Co., The, Chicago, Ill.  
❖ Foster—Walworth Mfg. Co., Boston, Mass.  
Fulton—Chaplin-Fulton Mfg. Co., Pittsburgh, Pa.  
Garratt, W. D., & Co., New York.  
Hennebelle Co., Chicago, Ill.  
Illinois Engineering Co., Chicago, Ill.  
❖ Jenkins Bros., New York, N. Y.  
❖ Kelly & Jones Co., The, Greensburg, Pa.  
Kieley—Kieley & Mueller, New York, N. Y.  
K. & T.—Klipfel Mfg. Co., Chicago, Ill.  
K. V.—Max Machine Co., Clinton, Mass.  
Lalor Fuel Oil System Co., Baltimore, Md.  
Locke Regulator Co., Salem, Mass.  
Loneragan, J. E., Co., Philadelphia, Pa.  
❖ Lunkenheimer Co., The, Cincinnati, O.  
McAlear Mfg. Co., Chicago, Ill.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.



- ◆ McGowan Co., The John H., Cincinnati, O.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ McRae & Roberts Co., The, Detroit, Mich.
- Morrison Bros., Dubuque, Iowa
- Mueller Mfg. Co., H., Decatur, Ill.
- Nathan Mfg. Co., New York, N. Y.
- ◆ Orme-Scott Valve Mfg. Co., Detroit, Mich.
- Pierce, Butler & Pierce Mfg. Corp., Valve & Gauge Div., Syracuse, N. Y. (Air relief.)
- Perkes, Chas., Co., Philadelphia, Pa.
- Pittsburgh Valve, Fdy. & Construction Co., Pittsburgh, Pa.
- Plouff's—The Plouff Company, Boston, Mass.
- Poage—American Valve & Meter Co., Cincinnati, O.
- ◆ Powell, Wm., Co., The, Cincinnati, O.
- P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- Richardson—H. G. Hammett, Troy, N. Y.
- Scott—Scott Valve Mfg. Co., Detroit, Mich.
- Stack—Stack Heater Co., Boston, Mass.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Triumph Valve Mfg. Co., Mansfield, O.
- Trojan—Brass Valve Mfg. Co., Inc., Troy, N. Y.
- ◆ United—United Brass Mfg. Co., Cleveland, O.
- Witts—G. E. Witt Co., Inc., San Francisco, Calif.
- Watson—Watson & McDaniel, Philadelphia, Pa.

**VALVES, RETURN LINE.**

- Bishop & Babcock Co., The, Cleveland, O.
- Dyblie—Morgan Construction Co., Worcester, Mass.
- Hoffman Specialty Co., Waterbury, Conn.
- Marsh, Jas. P., Co., Chicago, Ill.
- Monash-Younger Co., Chicago, Ill.
- O. E.—Milwaukee Air Power Pump Co., Milwaukee, Wis.
- Peck, Cassius Co., Rochester, N. Y.
- Vento—Wm. S. Haines Co., Philadelphia, Pa.

**VALVES, REVERSE CURRENT.**

- Knox—Blaw-Knox Co., Pittsburgh, Pa.
- Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

**VALVES, SAFETY, HIGH PRESSURE.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- American District Steam Co., N. Tonawanda, N. Y.
- Andrews (regurgitating)—Andrews Heating Co., Minneapolis, Minn.
- Ashton—The Ashton Valve Co., Boston, Mass.
- Belfield Co., H., Philadelphia, Pa.
- Bishop & Babcock Co., The, Cleveland, O.
- Boston Steam Specialty Co., Boston, Mass.
- Buckeye Iron & Brass Works, Dayton, O.
- ◆ Duplex—The Lunkenhelmer Co., Cincinnati, O.
- Cleveland Faucet Co., The, Cleveland, O.
- Coale—Nathan Mfg. Co., New York, N. Y.
- Consolidated Safety Valve Co., The, New York.
- Crane—Crane Co., Chicago, Ill.
- Crosby Steam Gate & Valve Co., Boston, Mass.
- Defiance—Defiance Packless Valve Co., Chicago, Ill.
- Edna Brass Mfg. Co., Cincinnati, Ohio.
- Ernst Safety First—Ernst & Co., Newark, N. J.
- Garratt, W. T., & Co., Inc., San Francisco, Cal.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- Karus—Hughson Steam Specialty Co., Chicago, Ill.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Lunkenhelmer Co., The, Cincinnati, O.
- McNab & Harlin Mfg. Co., New York, N. Y.
- ◆ McRae & Roberts Co., The, Detroit, Mich.
- Milwaukee Flush Valve Co., Milwaukee, Wis.
- Pilmer—N. O. Nelson Mfg. Co., St. Louis, Mo.
- Perkes, Chas., Co., Philadelphia, Pa.
- Pierce Butler & Pierce Mfg. Corp., Valve Gauge Div., New York, N. Y.
- Powell, Wm., Co., The, Cincinnati, Ohio.
- P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- Scott—The Industrial Instrument Co., Foxboro, Mass.
- Scott Valve Mfg. Co., Detroit, Mich.
- Star—Star Brass Mfg. Co., Boston, Mass.
- Triumph—Steam Appliance Co., West Allis, Wis.
- United States Air Compressor Co., Cleveland, Ohio.
- ◆ Walworth Mfg. Co., Boston, Mass.

**VALVES, SAFETY, LOW PRESSURE.**

- ◆ American Steam Gauge & Valve Co., Boston, Mass.
- Bishop & Babcock Co., The, Cleveland, O.
- Capitol Brass Works, Detroit, Mich.
- Crane—Crane Co., Chicago, Ill.
- Divekey Bros. Mfg. Co., Aurora, Ill. (for hot water faucet).
- Donnelly Mfg. Co., Boston, Mass.
- Hutchison—Hutchison Vapor Heating Co., Washington, D. C.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- Jumbo—The Magee Valve Co., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Lonergan, J. E., Co., Philadelphia, Pa.
- McRae & Roberts Co., The, Detroit, Mich.
- Pierce, Butler & Pierce Mfg. Co. Corp., Valve & Gate Div., New York.
- Russell—W. A. Russell & Co., New York, N. Y.
- Scott—Scott Valve Mfg. Co., Detroit, Mich.
- ◆ Walworth Mfg. Co., Boston, Mass.

**VALVES, SAFETY, SHUT-OFF.**

- Locke—Locke Regulator Co., Salem, Mass.

**VALVES, SAND PUMP.**

- Cook, A. D., Lawrenceburg, Ind.

**VALVES, SEATLESS.**

- ◆ Homestead Valve Mfg. Co., Inc., Homestead, Pa.

**VALVES, SEMI-STEEL.**

(See also "Valves, Steel.")

- ◆ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.

**VALVES, SEWER.**

(See "Traps, Back Water.")

**VALVES, SNOW.**

- Columbian Iron Works, Chattanooga, Tenn.

**VALVES, SHOWER BATH.**

(See "Cocks and Valves, Shower Bath.")

**VALVES, SIAMENSE.**

- American Foundry & Mfg. Co., St. Louis, Mo.
- Milwaukee Brass Mfg. Co., Milwaukee, Wis.

**VALVES, SIGHT FEED LUBRICATOR.**

- Nugent—Wm. Nugent & Co., Chicago, Ill.

**VALVES, SLIDE, LOCOMOTIVE.**

- Richardson—H. G. Hammett, Troy, N. Y.

**VALVES, SLIDING, GLOBE TYPE.**

- Flatplug—Everlasting Valve Co., Jersey City, N. J.

**VALVES, SLUICE.**

- Coffin—Coffin Valve Co., Boston, Mass.
- Coldwell-Wilcox Co., Newburgh, N. Y.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Rensselaer—Rensselaer Mfg. Co., Troy, N. Y.

**VALVES, SOAP MAKER'S.**

- McGowan, John H., Co., The, Cincinnati, O.

**VALVES, SPECIAL DESIGN.**

- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- Multiplate—O'Malley-Bears Valve Co., Chicago, Ill.
- Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.
- ◆ Powell Co., The Wm., Cincinnati, O.
- P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- Watson—Watson-McDaniel Co., Philadelphia, Pa.

**VALVES, STANDPIPE.**

- Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
- Clay Pulley—John H. Clay, Philadelphia, Pa.
- Fairbanks—The Fairbanks Co., New York, N. Y.
- Hunt—Rodney Hunt Machine Co., Orange, Mass.
- Iowa Mfg. Co., Oskaloosa, Ia.
- P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.
- Simplex Valve & Meter Co., Philadelphia, Pa.
- ◆ Walworth Mfg. Co., Boston, Mass.

**VALVES, STEAM FEED.**

- Ashton Valve Co., Boston, Mass.
- Atwood & Jones—Atwood & Jones Mfg. Co., Stillwater, Minn.
- Consolidated Car Heating Co., Albany, N. Y.
- Equitherm Control Corp., Brooklyn, N. Y.
- Trouts—Lufkin Foundry & Machine Co., Lufkin, Tex.

**VALVES, STEAM MAIN LOCOMOTIVE.**

- Edna Brass Mfg. Co., The, Cincinnati, O.
- Ernst Safety First—Ernst & Co., Newark, N. J.

**VALVES, STEEL AND SEMI-STEEL.**

- Bradford—Jno. B. Perkins Co., Boston, Mass.
- Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.
- Crane Co., Chicago, Ill.
- Edward—Edward Valve & Mfg. Co., East Chicago, Ind.
- Hancock—Hancock Inspirator Co., New York, N. Y.
- ◆ Kovaloo—Homestead Valve Mfg. Co., Homestead, Pa. (blow-off only)
- ◆ Jenkins—Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kennedy Valve Mfg. Co., The, Elmira, N. Y.
- K. V.—Max Machine Co., Clinton, Mass.
- ◆ Lunkenhelmer Co., The, Cincinnati, O.

- McNab & Harlin Mfg. Co., New York.  
 Nelson Valve Co., Chestnut Hill, Pa. (gate and globe).  
 Patterson-Allen—Everlasting Valve Co., New York, N. Y.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Pittsburgh Valve Foundry & Construction Co., Pittsburgh, Pa.  
 ♦ Powell, The, Wm., Co., Cincinnati, O.  
 P. & C.—Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Protected Seat & Valve Co., Pittsburgh, Pa.  
 Renewable—Star Brass Mfg. Co., Boston, Mass.  
 Richardson-Phoenix Co., The, Milwaukee, Wis.  
 Schutte & Koerting Co., Philadelphia, Pa.  
 United Injector Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, STOP AND CHECK.**

- Acton—John Acton, Brooklyn, N. Y.  
 Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Barclay—David Craig, Boston, Mass.  
 Consolidated Engine Stop Co., New York, N. Y.  
 Crane—Crane Co., Chicago, Ill.  
 Crosby Steam Gate & Valve Co., Boston, Mass.  
 Darling Valve & Mfg. Co., Ltd., The, Williamsport, Pa.  
 Davis—The G. M. Davis Regulator Co., Chicago, Ill.  
 Eclipse Brass Works, Detroit, Mich.  
 Edna Brass Mfg. Co., Cincinnati, O.  
 Edward—The Edward Valve & Mfg. Co., East Chicago, Ind.  
 Fairbanks—The Fairbanks Co., New York, N. Y.  
 Ford—Ford Regulator Corp., New York, N. Y. (emergency).  
 Ford—Colles Heater & Specialty Co., Chicago, Ill.  
 Foster—Foster Engineering Co., Newark, N. J.  
 Garrett, W. D. & Co., New York.  
 Golden—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Hennebohle Co., Chicago, Ill.  
 High Pressure Fitting & Valve Co., Paterson, N. J.  
 Illinois Engineering Co., Chicago, Ill.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Kieley—Kieley & Mueller, New York, N. Y.  
 Konold, M. J., Pittsburgh, Pa.  
 Lagonda—Lagonda Mfg. Co., Springfield, O.  
 Lock—Lock Regulator Co., Salem, Mass.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McAlear Mfg. Co., Chicago, Ill.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 New Bedford Boiler & Machine Co., New Bedford, Mass.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Pratt & Cady, Inc., Hartford, Conn.  
 R-K—Ruggles-Klingemann Mfg. Co., Salem, Ohio.  
 Reading Valve & Fittings Co., Reading, Pa.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 ♦ Simplex Caskey—Yarnall-Waring Co., Philadelphia, Pa.  
 Southwark Foundry & Machine Co., Philadelphia, Pa. (balanced hydraulic).  
 Strong—Strong Carlisle & Hammond Co., Cleveland, O.  
 Victory—Victory Manufacturing Co., San Francisco, Cal.  
 Watts Regulator Co., Lawrence, Mass.  
 Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, STOP, EMERGENCY.**

- Crane Co., Chicago, Ill.  
 Davis, G. M., Regulator Co., Chicago, Ill.  
 Foster Engineering Co., Newark, N. J.  
 Nelson Valve Co., Philadelphia, Pa.  
 Pittsburgh Valve & Fittings Co., Barberton, O.  
 Schutte & Koerting Co., Philadelphia, Pa.

**VALVES, STRAIGHTWAY.**

- ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Renewo—Lunkenheimer Co., Cincinnati, O.

**VALVES, SUCTION.**

- Ideal Bronze Co., Cleveland, O.

**VALVES, SUPERHEATED STEAM.**

- Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 Crane Co., Chicago, Ill.  
 Defiance Packless Valve Co., Chicago, Ill.  
 ♦ Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Jenkins Bros., New York, N. Y.  
 ♦ Kennedy Valve Mfg. Co., The, Elmira, N. Y.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 ♦ Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Pittsburgh Valve Foundry & Const. Co., Pittsburgh, Pa.  
 Pratt & Cady Co., Inc., Hartford, Conn.

- Protected Seat Valve Co., Pittsburgh, Pa.  
 Walworth Mfg. Co., Boston, Mass.

**VALVES, SWING JOINT.**

- Milwaukee Valve Co., Milwaukee, Wis.

**VALVES, TANDEM.**

- Everlasting—Everlasting Valve Co., Jersey City, N. J.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.

**VALVES, TANK.**

- (See "Valves, Float," and "Valves, Water Closet Flush Tank.")

- American Pin Co., Waterbury, Conn.  
 Axtell—Axtell Company, Ft. Worth, Tex.

**VALVES, THERMOSTATIC.**

- Bishop & Babcock Co., The, Cleveland, O.  
 Hoffman Heater Co., The, Lorain, O.  
 Hoffman Specialty Co., New York, N. Y.  
 Hornung, J. C., Chicago, Ill.  
 Lawson—Lawson Mfg. Co., Pittsburgh, Pa.  
 Leonard-Rooke Co., Providence, R. I.  
 Marsh—Jas. P. Marsh & Co., Chicago, Ill.  
 Monash Thermostatic—Monash Younger Co., Chicago, Ill.  
 Mott, J. L., Iron Works, New York, N. Y.  
 National—The Mustee Heater Co., Cleveland, O.  
 Pittsburgh Heater Co., Pittsburgh, Pa.  
 Powers Regulator Co., Chicago, Ill.  
 Robertshaw—Robertshaw Mfg. Co., Youngwood, Pa.  
 Romarco—Martin Co., Fort Wayne, Ind.  
 Scientific—Scientific Heater Co., Cleveland, Ohio.  
 Syphon—The Fulton Mfg. Co., Knoxville, Tenn.  
 Tillotson Humidifier Co., Providence, R. I.  
 Webster—Warren Webster & Co., Camden, N. J.

**VALVES, 3-WAY AND 4-WAY.**

- Bordo—L. J. Bordo Co., Philadelphia, Pa.  
 Boston Steam Specialty Co., Boston, Mass.  
 ♦ Detroit 3-Way—Detroit Lubricator Co., Detroit, Mich.  
 Detroit Brass & Malleable Works, Detroit, Mich.  
 Duriron—Duriron Castings Co., Dayton, O.  
 Hennebohle Co., Chicago, Ill.  
 Hoffman Mfg. Co., B., Milwaukee, Wis.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 Keystone Brass Co., Erie, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Perkins, H. K. Co., Taunton, Mass.  
 ♦ Powell, Wm., Co., The, Cincinnati, Ohio.  
 Pratt & Cady Co., Inc., The, Hartford, Conn.  
 Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.  
 Riggins—Watson-McDaniel Co., Philadelphia, Pa.  
 Rockford Brass Works, Rockford, Ill.  
 ♦ Simplex Caskey—Yarnall-Waring Co., Philadelphia, Pa.  
 ♦ Walworth Mfg. Co., Boston, Mass.

**VALVES, THROTTLE.**

- Boss—Dixon Valve & Coupling Co., Philadelphia, Pa.  
 Buckeye Iron & Brass Works, Dayton, O. (quick opening, balance).  
 Chambers—Watson-Stillman Co., New York, N. Y.  
 Chapman—Chapman Valve Mfg. Co., Indian Orchard, Mass.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Edward—The Edward Valve & Mfg. Co., East Chicago, Ind.  
 Everlasting—Everlasting Valve Co., Jersey City, N. J.  
 Exeter Brass Works, Exeter, N. H.  
 Fitts—Union Water Meter Co., Worcester, Mass.  
 Garratt, W. T., & Co., Inc., San Francisco, Cal.  
 Giant—The Wm. Powell Co., Cincinnati, O.  
 Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Goldsmith—Scott Valve Mfg. Co., Detroit, Mich.  
 Haydenville Co., The, Haydenville, Mass.  
 Hennebohle Co., Chicago, Ill.  
 Hoffman Mfg. Co., B., Milwaukee, Wis.  
 ♦ Homestead—Homestead Valve Mfg. Co., Homestead, Pa.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 ♦ Knox—Knox Mfg. Co., Inc., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Moak Machine & Tool Co., Port Huron, Mich.  
 Murphy—Furness Bros. Co., Chicago, Ill.  
 Nelson Valve Co., Chestnut Hill, Philadelphia, Pa.  
 Pittsburgh Valve Foundry & Construction Co., The, Pittsburgh, Pa.  
 Pratt & Cady Co., Inc., Hartford, Conn.  
 ♦ Ready—The Wm. Powell Co., Cincinnati, O.  
 Robertshaw—Robertshaw Mfg. Co., Youngwood, Pa.  
 Schutte—Schutte & Koerting Co., Philadelphia, Pa.  
 Strong—Strong Carlisle & Hammond Co., Cleveland, O.  
 ♦ Titan—The Wm. Powell Co., Cincinnati, O.

♦ **Walworth Mfg. Co.**, Boston, Mass.  
 Wassinger Co., The, Duluth, Minn.  
 Whale—New Bedford Valve Mfg. Co., New Bedford, Mass.

### VALVES, TIME, AUTOMATIC

Tycos—Taylor Instrument Companies, Rochester, N. Y.

### VALVES, TRANSFER

Belfield Co., H., Philadelphia, Pa.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.  
 Pittsburgh Valve Fdy. & Construction Co., Pittsburgh, Pa.

### VALVES, TRIGGER

Bertschy Engineering Co., Cedar Rapids, Ia.

### VALVES, TUBULAR WELL

Chicago Well Supply Co., Chicago, Ill.

### VALVES, TURBINE GOVERNING

Foster Engineering Co., Newark, N. J.  
 Lewis Steam Specialty & Valve Co., Philadelphia, Pa.  
 Ruggles-Klingemann Mfg. Co., Salem, Mass.

### VALVES, TUYERE

Belfield Co., H., Philadelphia, Pa.  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Pittsburgh Brass Mfg. Co., Pittsburgh, Pa.

### VALVES, TWIN

♦ **American—American Steam Gauge & Valve Mfg. Co.**, Boston, Mass.  
 Ashton Valve Co., Boston, Mass.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.

### VALVES, UNDERWRITERS

Kennedy Valve Mfg. Co., Elmira, N. Y.

### VALVES, UNION, BONNET

Pratt & Cady Co., Inc., Hartford, Conn.

### VALVES, URINAL FLUSHING

(See also "Valves, Water Closet Flush Tank," "Valves, Water Closet Flushing," etc.)

Boston—Phillips Flushing Tank Co., Boston, Mass.  
 Boyle, Johnson—Federal-Huber Co., Chicago, Ill.  
 Cleveland Flush Meter Co., Cleveland, O.  
 Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 E. R. B. C. O.—Edro Richardson Brass Co., Baltimore, Md.  
 Excello Valve Co., New York, N. Y.  
 Flushovalve—Flushovalve Co., Long Island, N. Y.  
 Flushometer—Kenney Mfg. Co., New York, N. Y.  
 Flushvoir—Kenney Specialty Co., New York, N. Y.  
 Haas—Phillip Haas, Dayton, O.  
 Ideal—Gaylord Sanitary Mfg. Co., Rochester, N. Y. (foot valve).  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Mott Iron Works, The, J. L., Trenton, N. J.  
 Philco—Phillips Lead & Supply Co., Providence, R. I.  
 Pilot—Hedges & Bro., Newark, N. J.  
 Republic Mfg. Co., Chicago, Ill.  
 Rexometer—J. D. Johnson Co., Philadelphia, Pa.  
 Royal Sloan—Sloan Valve Co., Chicago, Ill.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 No. 55 Sherwood—Sherwood Brass Works, Detroit, Mich.  
 Royal Sloan—Sloan Valve Co., Chicago, Ill.  
 Simplex—Columbus Brass Co., Columbus, O.  
 Toledo Mfg. & Supply Co., The, Toledo, O.  
 Vinometer—Standard Sanitary Mfg. Co., Pittsburgh.

### VALVES, VACUUM

Belvack Thermofiers—Consolidated Engineering Co., Chicago, Ill.  
 Clark-Cadle-Harmon Corp., Rochester, N. Y.  
 Cooper—Cooper Improved Relief Valve Co., Detroit, Mich.  
 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 D. G. C.—D. G. C. Trap Valve Co., New York, N. Y.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 Donnelly Mfg. Co., Boston, Mass.  
 Donnelly—Donnelly Systems Co., New York, N. Y.  
 Economy—Economy Vapor Heating Co., Omaha, Neb.  
 Edna Brass Mfg. Co., The, Cincinnati, O.  
 Eddy Engineering Co., Alpena, Mich.  
 Exeter Brass Works, Exeter, N. H.  
 Hennebohle Co., Chicago, Ill.  
 Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Hoffman Specialty Co., Waterbury, Conn.  
 Hutchison Vapor Heating Corp., Washington, D. C.  
 Illinois Engineering Co., Chicago, Ill.  
 ♦ **Jenkins Bros.**—Jenkins Bros., New York, N. Y.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.

Kieley—Kieley & Mueller, New York, N. Y.  
 Kitts—Kitts Mfg. Co., Oswego, N. Y.  
 Koalsave—Koalsave Vacuum Valve Co., New York.  
 Lee—The Wm. O. Lee, Port Huron, Mich.  
 Loneragan—J. E. Loneragan Co., Philadelphia, Pa.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 Marsh & Co., Jas. P., Chicago, Ill.  
 ♦ **Mason Regulator Co.**, Boston, Mass.  
 Monash Radifier—Monash-Younger Co., Chicago, Ill.  
 National—National Steam Specialty Co., Chicago, Ill.  
 Norwall—American Radiator Co., Chicago, Ill.  
 Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 O. E.—O. E. Specialty Mfg. Co., Milwaukee, Wis.  
 Peck Bros. & Co., The, New Haven, Conn.  
 P. & P.—Peerless Engineering Co., Chicago, Ill.  
 Rochester—Rochester Vacuum Valve Co., Rochester.  
 Rochester—Richard Thompson Co., New York.  
 Russell's Non-Adjustable—W. A. Russell Co., New York, N. Y.  
 Sarco—Sarco Co., Inc., New York, N. Y.  
 Simonds—Simonds Heating & Specialty Co., Detroit.  
 Stickie—Open Coil Heater & Purifier Co., Indianapolis, Ind.  
 Therm—E. F. Houghton & Co., Philadelphia, Pa.  
 Triton—U. S. Radiator Corp., Detroit, Mich.  
 Vac Ucheck—The Bishop & Babcock Co., Cleveland.  
 Vac Ustat—The Bishop & Babcock Co., Cleveland, O.  
 Vacco—Beaton & Cadwell Mfg. Co., New Britain, Conn.  
 Vacu—Chapman Steam Specialty Co., Canton, O.  
 Vento—William S. Haines & Co., Philadelphia, Pa.  
 Van Auken—The Bishop & Babcock Co., Cleveland, O.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.  
 Webster Modulation—Warren Webster & Co., Camden, N. J.  
 Witt's—G. E. Witt Co., Inc., San Francisco, Cal.

### VALVES, VACUUM AND SAFETY FOR OIL STILL

♦ **Fischer Governor Co.**, Inc., Chicago, Ill.

### VALVES, VAULT, SEWER CONNECTION

Meerhoff—H. H. Meerhoff, Richmond, Ind.

### VALVES, VENT, DUPLEX TANK

McDonald, A. Y., Mfg. Co., Dubuque, Ia.

### VALVES, WATER CLOSET, FLUSH

Sherwood Brass Works, Detroit, Mich.

### VALVES, WATER CLOSET FLUSH TANK, CONE AND SIPHON

Acme—Wm. S. Emery, New York, N. Y.  
 Alliance Brass Foundry Co., Detroit, Mich.  
 Alpha—Federal-Huber Co., Chicago, Ill.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 ARR—Union Metal Works, Chelsea, Mass.  
 B. B.—Boston Brass Co., Waltham, Mass.  
 Boyle—Federal-Huber Co., Chicago, Ill.  
 Briggs, William, Inc., Brooklyn, N. Y.  
 Burlington—Burlington Brass Works, Burlington, Wis.  
 Cahill—Cahill Mfg. Co., Worcester, Mass.  
 Cambridge—McCambridge Co., Philadelphia, Pa.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Common Sense—The Midland Brass Works, Fort Worth, Tex.  
 Crane Co., Chicago, Ill.  
 Delany—Coyne & Delany Co., Brooklyn, N. Y.  
 Donnelly Mfg. Co., Boston, Mass.  
 Douglas Pattern—Rockford Brass Works, Rockford, Ill.  
 Douglas—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Douglas type—Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Dwasco Mfg. Co., Canandaigua, N. Y.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Elm—F. W. Webb Mfg. Co., Boston, Mass.  
 Engel—Engel Mfg. Co., Syracuse, N. Y.  
 E. R. B. Co.—Edro Richardson Brass Co., Baltimore, Md.  
 Eureka—Kincaid Bros., Pittsburgh, Pa.  
 Exeter Brass Works, Exeter, N. H.  
 Frost Mfg. Co., The, Kenosha, Wis.  
 Gaco—Pittsburgh Gauge & Supply Co., Pittsburgh, Pa.  
 Gooseneck—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Gorman—F. W. Webb Mfg. Co., Boston, Mass.  
 Hanover—F. W. Webb Mfg. Co., Boston, Mass.  
 Hedges & Bro., Newark, N. J.  
 Hennebohle Co., Chicago, Ill.  
 Hometer—F. W. Webb Mfg. Co., Boston, Mass.  
 Hustler—Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Hydraulic—Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Illinois Malleable Iron Co., Chicago, Ill.  
 Inbraco—Indiana Brass Co., The, Frankfort, Ind.

James Mfg. Co., Canton, Ohio.  
 Jenkins—Edro Richardson Brass Co., Baltimore, Md.  
 Johnson—Federal-Huber Co., Chicago, Ill.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Jost's Sons, Edmund, Newark, N. J.  
 Kalamazoo—Riverside Foundry & Galvanizing Co., Kalamazoo, Mich.  
 Lewis Patent—Haydenville Co., Haydenville, Mass.  
 Long—Geo. W. Maltby & Sons Co., Buffalo, N. Y.  
 Loyal Brass Co., Cleveland, O.  
 Lutz—Ferdinand Lutz, New York, N. Y.  
 McCambridge Co., Philadelphia, Pa.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 McNab & Harlin Mfg. Co., New York, N. Y.  
 McShane Bell Foundry Co., Baltimore, Md.  
 Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Maximeters—Sturgis Company, Sturgis, Mich.  
 Meyer-Sniffen Co., New York, N. Y.  
 M.—F. W. Webb Mfg. Co., Boston, Mass.  
 Miller, Charles A. Co., Sturgis, Mich.  
 Miller-Hubbard Mfg. Co., Sturgis, Mich.  
 Modern Iron Works, Quincy, Ill.  
 Monarch—Monarch Brass Co., Cleveland, O.  
 Monash-Youker Co., Chicago, Ill.  
 Moore's—Dimock & Fink Co., New York, N. Y.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 M. V. B.—Morency-Van Buren Mfg. Co., Sturgis, Mich.  
 Nelson—Fleck Bros. Co., Philadelphia, Pa.  
 N. H.—Exeter Brass Works, Exeter, N. H.  
 Neptune—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Niagara—The John Douglas Co., Cincinnati, O.  
 Park & McKay Co., The, Detroit, Mich.  
 Peck Bros. & Co., The, New Haven, Conn.  
 Perfect—American Pin Co., Waterbury, Conn.  
 Perkes, Co., Charles, Philadelphia, Pa.  
 Pfau—Pfau Mfg. Co., The, Cincinnati, O.  
 Philco—Phillips Lead & Supply Co., Providence, R. I.  
 Pilot—Hedges & Co., Newark, N. J.  
 Plunger Cone—Riverside Foundry & Galvanizing Co., Kalamazoo, Mich. (Cone, Siphon, Goose-neck & Plunger.)  
 Success—Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Texas Mfg. Co., Ft. Worth, Tex.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union Brass & Metal Mfg. Co., St. Paul, Minn.  
 Vogel, Joseph A., Co., Wilmington, Del.  
 Watrous Aquameter—Federal-Huber Co., Chicago.  
 Webco Royal—F. W. Webb Mfg. Co., Boston, Mass.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 The World—The Humphreys Mfg. Co., Mansfield, O.

#### VALVES, WATER CLOSET FLUSHING, FLUSHOMETER TYPE.

Alliance Brass Foundry Co., Detroit, Mich.  
 American Pin Co., Waterbury, Conn.  
 Aquameter—Federal-Huber Co., Chicago, Ill.  
 ARRG—Union Metal Works, Chelsea, Mass.  
 Atavio—McCambridge Co., Philadelphia, Pa.  
 Auto—The Columbus Brass Co., Columbus, O.  
 Bloom Flusher Co., Tiffin, O.  
 Bowlius Flush Meter, Bowlius Jewel—Bowlius Mfg. Co., Springfield, O.  
 Boyle Flush Valve—Federal-Huber Co., Chicago, Ill.  
 Cabot Co., The, Springfield, Mass.  
 Chicago Pottery Co., Chicago, Ill.  
 Cleveland—Cleveland Flush Meter Co., Cleveland, O.  
 Climax—Climax Sanitary Co., Detroit, Mich.  
 Coronada—Sanitary Mfg. Co., Hamilton, O.  
 Crown—Crown Valve & Supply Co., New York, N. Y.  
 Crest—E. Stebbins Mfg. Co., Springfield, Mass.  
 Douglas Pattern—Columbus Brass Co., Columbus, O.  
 Douglas—The John Douglas Co., Cincinnati, O.  
 Elba—Federal-Huber Co., Chicago, Ill.  
 Eljer—Eljer Co., Cameron, W. Va.  
 Ernst Safety First—Ernst & Co., Newark, N. J.  
 Excelvalve Co., New York, N. Y.  
 Federal-Huber Co., Chicago, Ill. Trade names—Arcade, Alpha, Conway, Copley, La Salle, Leavenworth.  
 Flushometer—Kenney Mfg. Co., New York, N. Y.  
 Flushvalve—Flushvalve Co., New York, N. Y.  
 Flushvoir—Kenney Specialty Co., New York, N. Y.  
 Georgia—Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Haas—Philip Haas Co., Dayton, O.  
 Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 Hydraulic—Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.

I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 ♦ J-M—Johns-Manville, Inc., New York, N. Y.  
 Kalmor—Single Faucet & Flush Valve Co., Chicago, Ill.  
 Kenney—The Kenney Mfg. Co., New York, N. Y.  
 Mansfield—Acheson Mfg. Co., Braddock, Pa.  
 Metrio—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Meyer-Sniffen Co., New York, N. Y.  
 Milwaukee Flush Valve Co., Milwaukee, Wis.  
 Monarch—Republic Brass Co., The, Cleveland, O.  
 Monitor—Philip Haas Co., Dayton, O.  
 Mott Iron Works, J. L., Trenton, N. J.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Neptune—Dalton-Ingersoll Mfg. Co., Boston, Mass.  
 Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Nethery—The Peck Bros. & Co., New York, N. Y.  
 Peck Bros. Co., New Haven, Conn.  
 Philco—Phillips Lead & Supply Co., Providence, R. I.  
 Republic Oil Regulator—Stringer Bros. Foundry Co., Chicago, Ill.  
 Rex—Jenkins Mfg. Co., New York, N. Y.  
 Rexometer, Saxon—J. D. Johnson Co., Philadelphia, Pa.  
 Robertshaw-Douglas—Robertshaw Mfg. Co., Youngwood, Pa.  
 Royal—Sloan Valve Co., Chicago, Ill.  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Shaffer, Charles H., Muskegon, Mich.  
 Shoppe—Hedges Co., Newark, N. J.  
 Simplex, Oscilla, Presto—J. L. Mott Iron Works, Trenton, N. J.  
 Single Faucet & Flush Valve Co., Chicago, Ill.  
 Sloan—Sloan Valve Co., Chicago, Ill.  
 Upresso—Jenkins Mfg. Co., New York, N. Y.  
 Vimometer—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Vitro—James M. Teahan, Detroit, Mich.  
 Volumeter—Ideal Mfg. Co., Detroit, Mich.  
 Watrous Aquameter—Federal-Huber Co., Chicago, Ill.  
 Watrous Pushometer—Federal-Huber Co., Chicago, Ill.  
 ♦ Watrous-Watometer—Imperial Brass Mfg. Co., Chicago, Ill.  
 White—White Flushing Valve Mfg. Co., Denver, Colo.  
 Young—Acheson Mfg. Co., Braddock, Pa.

#### VALVES, WATER CLOSET, SEAT ACTION.

(See also "Water Closet Combinations, Seat Action.")  
 Rexometer, Saxon—J. D. Johnson Co., Philadelphia, Pa.

#### VALVES, WATER LEVEL CONTROL.

(See also "Regulators, Water Level.")

♦ Fisher Governor Co., Inc., The, Chicago, Ill.  
 ♦ Swartwout—Ohio Body & Blower Co., The, Cleveland.

#### VALVES, WATER MIXING, THERMOSTATIC.

Leonard—Leonard Rooke Co., Providence, R. I.

#### VALVES, WATER RELIEF.

American—American Steam Gage & Valve Mfg. Co., Boston, Mass.  
 Anderson—Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.  
 Ashton—The Ashton Valve Co., Boston, Mass.  
 Crane—Crane Co., Chicago, Ill.  
 Curtis—Julian d'Este Co., Boston, Mass.  
 Davis—G. M. Davis Regulator Co., Chicago, Ill.  
 ♦ Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Foster—Foster Engineering Co., Newark, N. J.  
 Garratt, W. T., & Co., Inc., San Francisco, Cal.  
 Kunkle Valve Co., Fort Wayne, Ind.  
 Lonergan—J. E. Lonergan Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., The, Cincinnati, O.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Scott—Scott Valve Mfg. Co., Detroit, Mich.  
 Triumph Valve Mfg. Co., Mansfield, O.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 W. & McD.—Watson & McDaniel Co., Philadelphia, Pa.

#### VALVES, WHISTLE.

Boston Steam Specialty Co., Boston, Mass.  
 Buckeye Iron & Brass Works, Dayton, O.  
 Crane—Crane Co., Chicago, Ill.  
 ♦ Jenkins Bros.—Jenkins Bros., New York, N. Y.  
 ♦ Kelly & Jones Co., The, Greensburg, Pa.  
 Lonergan, J. E. Co., Philadelphia, Pa.  
 ♦ Lunkenheimer Co., Cincinnati, O.  
 ♦ National Gauge Co., Brooklyn, N. Y.  
 ♦ Powell, Wm., Co., The, Cincinnati, O.  
 Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 ♦ Walworth Mfg. Co., Boston, Mass.

#### VALVES, WORKING BARREL OR TUBULAR WALL.

Hough Mfg. Co., The, Chas. N., Franklin, Pa.

- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Oil Well Supply Co., Pittsburgh, Pa.
- Red Jacket—Red Jacket Mfg. Co., Davenport, Ia.

**VALVES, Y.**

- Columbian Iron Works, Chattanooga, Tenn.
- Crane Co., Chicago, Ill.
- Crosby Steam Gage & Valve Co., Boston, Mass.
- Eastwood Wire Mfg. Co., Belleville, N. J.
- ◆ **Warema—National Tube Co., Pittsburgh, Pa.**
- ◆ **Jenkins Bros.—Jenkins Bros., New York, N. Y.**
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Ludlow—Ludlow Valve Mfg. Co., Troy, N. Y.
- ◆ Lunkenheimer Co., The, Cincinnati, O.
- ◆ O. I. Co.—Ohio Injector Co., Wadsworth, Ohio.
- ◆ **Powell Co., The Wm., Cincinnati, O.**
- ◆ South Park Machine & Supply Co., Port Huron, Mich.
- ◆ **Walworth Mfg. Co., Boston, Mass.**

**VARIATORS, EXPANSION.**

- American District Steam Co., North Tonawanda, N. Y.
- Central Station Steam Co., Detroit, Mich.

**VARIATORS, PRECISION THREAD LEAD SCREW.**

- Precision & Thread Grinder Mfg. Co., Philadelphia, Pa.

**VARNISHES, ENAMELS, JAPANS, FILLERS, DYES, STAINS AND PAINT SPECIALTIES.**

- Acme—Acme White Lead & Color Works, Detroit, Mich.
- Ajax—Sherwin Williams Co., Cleveland, O.
- Arnstein's—Eugene Arnstein, Inc., Chicago, Ill.
- Atlantic Dier & Varnish Co., Philadelphia, Pa.
- Eternolin—Wm. T. Baker, Inc., Jersey City, N. J.
- Frost's—Frost Paint & Oil Co., Minneapolis, Minn.
- Gasolla—Federal Process Co., Cleveland, O.
- Johnstam—Johnstam Mfg. Co., New York, N. Y. (shellac)
- Johnson Compound & Supply Co., Rochester, N. Y.
- Klein Mfg. Co., The, Cleveland, O.
- Natoco—National Roofing Co., Tonawanda, N. Y.
- Norwesco—Northwestern Chemical Co., Marietta, O.
- Norwesco, Utility Black—Northwestern Chemical Co., Marietta, O.
- Resisto—Klein Mfg. Co., Cleveland, O.
- Rinald Bros. Paint Works, Inc., Philadelphia, Pa.
- Sherwin Williams Co., Cleveland, O.
- Truscon Laboratories, Detroit, Mich.
- Watertite—Black Diamond Mfg. Co., Cincinnati, Ohio.
- Lingerwett & Wonder paste—Wilson Imperial Co., Newark, N. J.

**VENTS, AIR.**

- Adelphia—Haines, Jones & Cadbury Co., Philadelphia, Pa.
- Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.
- Essex Foundry, Newark, N. J.
- Hajoca—Haines, Jones & Cadbury Co., Philadelphia.
- ◆ Hays Mfg. Co., Erie, Pa. (with cleanout).
- Kelly—Thos. Kelly & Bro., Chicago, Ill.
- Maltby, Geo. W. & Sons Co., Buffalo, N. Y.
- ◆ **McRae & Roberts Co., Detroit, Mich.**
- Morrison Bros., Dubuque, Iowa (tank wagon).
- Sanitary Company of America, Linfield, Pa.
- Wolverine Foundry Co., Detroit, Mich.

**VENTS, RADIATOR AND RISER.**

- Doody Vapor Heating Co., Inc., The, Boston, Mass.
- Thermosk—Jas. P. Marsh & Co., Chicago, Ill.

**VENTS, ROOF, SOIL PIPE.**

- Brockton—Brockton Fitting Co., Brockton, Mass.
- Pittsburgh Gage & Supply Co., Pittsburgh, Pa.

**VENTS, TRAP.**

- Haydenville Co., The, Haydenville, Mass.
- McClellan—F. N. Dubois & Co., New York, N. Y.
- Smith—Fries & Co., Buffalo, N. Y.

**VENTILATING SETS, PORTABLE.**

- "A. B. C."—American Blower Co., Detroit, Mich.
- Sturtevant—B. F. Sturtevant Co., Hyde Park, Mass.

**VENTILATORS.**

- Acme, Airout—Acme Ventilator Corp., Boston, Mass.
- "A. B. C."—American Blower Co., Detroit, Mich.
- Acorn, O. K.—Canton Art Metal Co., Canton, O.
- Aeolus—Paul Dickinson, Inc., Chicago, Ill.
- Alabama—Decatur Cornice & Roofing Co., Inc., New Albany, Ala.
- Anchor—Meurer Bros. Co., Brooklyn, N. Y.
- Aeroboost, Aeropull, Aeroplane—Paul R. Jordan & Co., Indianapolis, Ind.
- Arex—Arex Company, Chicago, Ill.
- Autoforce—Autoforce Ventilating System, Boston, Mass.

- Bl-cal-ky—Hersh & Brother, Allentown, Pa.
- Blackman—Howard & Morse, New York, N. Y.
- Bruce & Cook, New York, N. Y.
- Buffalo Forge Co., Buffalo, N. Y.
- Burt—Burt Mfg. Co., Akron, Ohio.
- Century Ventilating Co., New York, N. Y.
- Columbian Steel Tank Co., Kansas City, Mo.
- Connecticut Blower Co., Inc., The, Hartford, Conn.
- Consolidated Sheet Metal Wks., Milwaukee, Wis.
- Crown—Crown Ventilator Co., Milwaukee.
- Curtiss, J. H., Co., New York.
- Cyclone—Gold Car Heating & Lighting Co., Brooklyn, N. Y.
- Earle Hercules—Berger Bros., Philadelphia, Pa.
- Effco—Hirschman, W. F., Inc., Buffalo, N. Y.
- Fenn's Rotary Imp., Fenn's Archimedian Rotary—Fenn Ventilator Co., Boston, Mass.
- Fisher Automatic—Martin Fisher & Sons, Buffalo.
- Gaco—Pittsburgh Gage & Supply Co., Pittsburgh, Pa.
- Garner Ventilating Co., Chicago, Ill.
- Geddes, Joseph, Rochester, N. Y.
- Globe—Globe Iron Roofing & Corrugating Co., Cincinnati, O.
- Globe Iron Roofing & Corrugating Co., Cincinnati, O.
- Hackney—Hackney Ventilating Co., St. Paul, Minn.
- H. & C.—The Hart & Cooley Co., Inc., New Britain, Conn.
- Highton's Patent—Wm. Highton & Sons, Nashua, N. H.
- Ideal—Ideal Ventilator Co., Providence, R. I.
- Keystone—Follansbee Brothers Co., Pittsburgh, Pa.
- Kirk & Blum Mfg. Co., Cincinnati, O.
- Koerting—Schutte & Koerting Co., Philadelphia, Pa.
- K-S-V—Kernchen Company, Chicago, Ill.
- Lee Glass Top—Lee, Thomas & Son Co., Cincinnati, Ohio.
- Mechanicsville Specialty Supply Mfg. Co., Mechanicsville, N. Y.
- Meek Oven Co., The, Newburyport, Mass.
- Motor—Barney Ventilating Fan Works, Boston, Mass.
- Mushroom—Hersh Brothers Co., Allentown, Pa.
- Mushroom—Knowles Mushroom Ventilator Co., New York (air diffusers).
- National—National Ventilating Co., New York, N. Y.
- Newport Rolling Mill Co., Newport, Ky.
- Pacific—Thacher Furnace Co., New York, N. Y.
- Packer's Reckap—Arex Co., Chicago, Ill.
- Peerless—New York Blower Co., Chicago, Ill.
- Perfection—Berger Bros. Co., Philadelphia, Pa.
- Petry, N. A., Co., Inc., Philadelphia, Pa.
- Pullman—The Pullman Ventilator Mfg. Co., York, Pa. (roof and window).
- Richardson's—New England Ventilating & Heating Co., Providence, R. I.
- Rohaco—Roberts-Hamilton Co., Minneapolis, Minn.
- Rose Top—Danzon Metal Works, Hagerstown, Md.
- Rotor—Barney Ventilating Fan Works, Boston, Mass.
- Royal—Royal Ventilator Co., Philadelphia, Pa.
- Schueler—Schueler Ventilator Co., Bloomington, Ill.
- Sheet Metal Products Co., Duluth, Minn.
- Standard Ventilator Co., Lewisburg, Pa.
- Standard—Standard Natural Ventilator Co., Milwaukee, Wis.
- The Star—Merchant & Evans Co., Inc., Philadelphia.
- Stine Co., The J. C., Tyrone, Pa. (mine).
- Storm King, Vanco Sylphon—F. Van Norden & Co., Boston, Mass.
- Sturtevant, B. F. Co., Boston, Mass.
- ◆ Swartwout, Rotary Ball Bearing and Gravity Closing—The Ohio Body & Blower Co., Cleveland, O.
- Tuttle & Bailey Mfg. Co., Inc., New York, N. Y.
- Universal—Universal Ventilating Co., Kansas City, Mo.
- Uno—Uno Ventilator Co., Cliftondale, Mass.
- Washburne & Co., E. G., New York, N. Y.
- Wheeling Corrugating Co., Wheeling, W. Va.
- Wooden Ventilator Co., The, East Palestine, O.
- Young Bros. Company, Detroit, Mich.

**VENTILATOR APPARATUS FOR SAND-BLAST SYSTEM.**

- Pangborn—Pangborn Corp., Hagerstown, Md.

**VENTILATORS, SHIP.**

- National Marine Lamp Co., New York, N. Y.
- Quinn Bros., Paterson, N. J.

**VENTILATORS, WATER CLOSET.**

- Aerial—Shadall Mfg. Co., Wauwatosa, Wis.
- Boston Vent—J. L. Mott Iron Works, Trenton, N. J.
- Cyclone—Sanitary Appliance Co., Neenah, Wis.

**VIBRATORS, PNEUMATIC, FOUNDRY.**

- Adams—Adams Company, Dubuque, Iowa.
- Malleable Fittings Co., Branford, Conn.
- Mumford—Hanna Engineering Works, Chicago, Ill.
- Tessmer—Tessmer Machine & Tool Co., Detroit, Mich.

**VISE AND ANVIL.**

- American Scale Co., Kansas City, Mo.
- Fisher & Norris, Trenton, N. J.
- Millers Falls Co., New York, N. Y.
- Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.
- Stewart—Chicago Flexible Shaft Co., Chicago, Ill.

**VISES, JACK, ERECTING.**

Universal—Richard Dudgeon, New York, N. Y.

**VISE JAWS.**

- ♦ Armstrong Mfg. Co., The, Bridgeport, Conn.
- Diener Mfg. Co., Geo. W., Co., Chicago, Ill.

**VISE LINERS.**

Ideal—Hohnsbeen Mfg. Co., Minneapolis, Minn.

**VISES, BENCH.**

(See also Vises, Quick Action.)

- Anchor Line—Prentiss Vice Co., New York, N. Y.
- Baker's Jersey—Leavens Mfg. Co., Vineland, N. J.
- Baker Cutlery & Hdw. Co., Inc., New York.
- Buckeye Vice Co., Cleveland, O.
- Bull-Dog—Prentiss Vice Co., New York, N. Y.
- Champion—Bonney Forge & Tool Works, Inc., Allentown, Pa.
- Columbian—Columbian Hardware Co., Cleveland, O.
- Crane—Crane Co., Chicago, Ill.
- Diamond—Geo. W. Diener Mfg. Co., Chicago, Ill.
- Easton Tool & Machine Co., Easton, Pa.
- Empire—Erie Tool Works, The, Erie, Pa.
- Farmers—Athol Machine Co., Athol, Mass.
- Farmers—Bonney Forge & Tool Co., Allentown, Pa.
- Fisher & Norris, Trenton, N. J.
- Gipsy—Prentiss Vice Co., New York, N. Y.
- Goodell-Pratt Co., Greenfield, Mass.
- Hammer & Co., Branford, Conn.
- Herriman Quick Acting—South Haven Foundry & Machine Co., South Haven, Mich.
- ♦ Hollands, Keystone—Hollands Mfg. Co., Erie, Pa.
- Jarecki Mfg. Co., Erie, Pa.
- Jarecki Pattern—The Oswego Tool Co., Oswego, N. Y.
- Lehigh—Bonney Forge & Tool Works, Allentown, Pa.
- Lewis Pat.—Prentiss Vice Co., New York, N. Y.
- Millers Falls Co., New York, N. Y.
- New Britain Machine Co., The, New Britain, Conn.
- Oliver Machinery Co., Grand Rapids, Mich.
- Oval Slide—E. C. Stearns & Co., Syracuse, N. Y.
- ♦ Parker's Vulcan—The Chas. Parker Co., Meriden, Conn.
- Phoenix—Phoenix Hardware Co., Buffalo, N. Y.
- Prentiss Rapid Transit—Prentiss Vice Co., New York.
- Prentiss, Shephard—Prentiss Vice Co., New York, N. Y.
- ♦ Reed Mfg. Co., Erie, Pa.
- ♦ Rock Island Mfg. Co., Rock Island, Ill.
- Sargent—Sargent & Co., New Haven, Conn.
- Snedikers—Tower & Lyon Co., New York, N. Y.
- Star—Baker Cutlery & Hardware Co., Inc., New York, N. Y.
- St. Louis Sales Co., St. Louis, Mo. (quick action).
- Stearns, E. C. & Co., Syracuse, N. Y.
- Stephen's—Tower & Lyon Co., New York, N. Y.
- ♦ Walworth Mfg. Co., Boston, Mass.
- Yost—The Yost Mfg. Co., Meadville, Pa.

**VISES, BLACKSMITHS', HORSESHOERS' AND BOX.**

- Burke—Burke, P. F., So. Boston, Mass.
- Champion—Champion Tool Co., Meadville, Pa.
- Columbus Forge & Iron Co., Columbus, O.
- ♦ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.
- Indian Chief—Baker Cutlery & Hardware Co., Inc., New York, N. Y.
- Iron City Star Brand—Iron City Tool Works, Ltd., Pittsburg, Pa.
- New London Vise Works, New London, Conn. (hand forged).
- Noyes, B. B., Co., Inc., Greenfield, Mass.
- O'Leary & Son Co., Arthur, Chicago, Ill.

**VISES, CIRCULAR SAW.**

- ♦ Atkins, E. C., & Co., Indianapolis, Ind.
- Huther Bros. Mfg. Co., Inc., Rochester, N. Y.

**VISES, CLAMP.**

- Amateur—Athol Machine Co., Athol, Mass.
- Farmers—Athol Machine Co., Athol, Mass.
- Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.
- ♦ Stanley Rule & Level Co., New Britain, Conn.
- Stearns—E. C. Stearns & Co., Syracuse, N. Y.

**VISES, COMBINATION, BENCH AND PIPE.**

- Armstrong Mfg. Co., The, Bridgeport, Conn.
- Barrett Machine Tool Co., Meadville, Pa.
- Blake—Prentiss Vice Co., New York, N. Y.
- Bonney—Bonney Forge & Tool Works, Allentown, Pa.
- Crawford—Jos. H. Young Co., Boston, Mass.
- Erie Tool Works, The, Erie, Pa.
- Fisher—Fisher & Norris, Trenton, N. J.
- Fulton Star—Fulton Machine & Vise Co., Lowville, N. Y.
- Goodell-Pratt Co., Greenfield, Mass.
- ♦ Hollands—Hollands Mfg. Co., Erie, Pa.

Jarecki Mfg. Co., Erie, Pa.

- Fisher & Norris Co., Trenton, N. J.
- Fulton Star—Fulton Mach. & Vise Co., Lowville, N. Y.
- Monarch—Prentiss Vice Co., New York, N. Y.
- Oval Slide—Athol Machine Co., Athol, Mass.
- ♦ Parker's—Parker Co., The Charles, Meriden, Conn.
- Parker Pattern—The Oswego Tool Co., Oswego, N. Y.
- ♦ Reed—Reed Mfg. Co., Erie, Pa.
- Rex—Prentiss Vice Co., New York, N. Y.
- ♦ Rock Island Mfg. Co., Rock Island, Ill.
- Smith Pattern—The Oswego Tool Co., Oswego, N. Y.
- Star—Baker Cutlery & Hdw. Co., Inc., New York.
- Tiger—Emmert Mfg. Co., Waynesboro, Pa.
- Vanderman's—The Vanderman Mfg. Co., Willimantic, Conn.
- ♦ Walworth, Klingfast—Walworth Mfg. Co., Boston, Mass.
- ♦ Western Tool & Mfg. Co., Springfield, Ohio.
- Yost—The Yost Mfg. Co., Meadville, Pa.

**VISES, DOUBLE SCREW.**

Fisher—Fisher & Norris, Trenton, N. J.

**VISES FOR DRILL PRESSES, MILLING MACHINES AND SHAPERS.**

- Acme—Acme Tool Co., Milwaukee, Wis.
- American Pneumatic Chuck Co., Chicago, Ill.
- Armstrong—Armstrong Bros. Tool Co., Chicago, Ill.
- Badger Gas & Gasoline Engine Co., Kansas City, Kan.
- Barker—Thomas Elevator Co., Chicago, Ill.
- Becker Milling Machine Co., Hyde Park, Mass.
- Bilton Machine Tool Co., Bridgeport, Conn.
- Brightman Machine Co., The, Cleveland, O.
- ♦ Brown & Sharpe Mfg. Co., Providence, R. I.
- Carroll—Cincinnati Vise Co., Cincinnati, O.
- Carter & Hakes Co., Winsted, Conn.
- ♦ Champion—Western Tool & Mfg. Co., Springfield, O.
- Cincinnati—Cincinnati Bickford Tool Co., Oakley, O.
- Cochrane-Bly Co., Rochester, N. Y.
- Diamond—The Adams Co., Dubuque, Ia.
- Fixie—Manning, Maxwell & Moore, Inc., New York.
- Fox Machine Co., Grand Rapids, Mich.
- Fulton Machine & Forging Co., The, Canal Fulton, O.
- Gem—J. E. Martin Tool & Die Co., Springfield, Ohio.
- Graham—Graham Mfg. Co., Providence, R. I.
- Hannifin Mfg. Co., Chicago, Ill. (pneumatic).
- Hartford Special Machinery Co., Hartford, Conn.
- Hoosier—Hoosier Drilling Machine Co., Goshen, Ind.
- Improved—J. E. Plunket, Chicago, Ill.
- Jackson—Easton Tool & Machine Co., Easton, Pa.
- Lueck, E. A., Co., Milwaukee, Wis.
- ♦ Marvel—Armstrong-Blum Mfg. Co., Chicago, Ill.
- Mather Machine Works, Cleveland, O.
- Meriden Machine Tool Co., The, Meriden, Conn.
- Mohn—W. D. Mohn & Co., Reading, Pa.
- Nestor Mfg. Co., Inc., New York.
- Modern Machinery Co., Wilmington, Del.
- Morgan Vise Co., Chicago, Ill.
- Oblique—Sellew Machine Tool Co., Pawtucket, R. I.
- Plunket Improved—J. E. Plunket, Chicago, Ill.
- Potter & Johnson Machine Co., Pawtucket, R. I.
- Pratt & Whitney Co., Hartford, Conn.
- Queen—Harker Mfg. Co., Cincinnati, Ohio.
- Sanford—F. C. Sanford Mfg. Co., Bridgeport, Conn.
- Sellew Machine Tool Co., Pawtucket, R. I.
- ♦ Skinner Chuck Co., The, New Britain, Conn.
- Supreme—Spafford Tool Works, Hartford, Conn.
- ♦ Sweetland—The Hoggson & Pettis Mfg. Co., New Haven, Conn.
- S & S—Schuchardt & Schutte, New York, N. Y.
- The Will-Burt Co., Orrville, O.
- TS—Wm. S. Nicholls, Hoosick Falls, N. Y.
- Union Tool Co., Orange, Mass.
- Vanderbeek—Ainslie Machine & Tool Works, Hartford, Conn.
- Yost—Yost Mfg. Co., Meadville, Pa.

**VISES, HAND AND FIX.**

- ♦ Billings—The Billings & Spencer Co., Hartford, Conn.
- Bonney—Bonney Forge & Tool Works, Allentown, Pa.
- Bullock Mfg. Associates, Springfield, Mass.
- ♦ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.
- Diener, Geo. W., Mfg. Co., Chicago, Ill.
- Dikeman Mfg. Co., The, South Norwalk, Conn.
- Goodell-Pratt Co., Greenfield, Mass.
- ♦ Jewellers—Lowell Wrench Co., The, Worcester, Mass.
- Kilborn—Bishop Co., New Haven, Conn.
- Millers Falls Co., New York, N. Y.
- Smith, Otis A., Rockfall, Wis.
- Starrett Co., The, L. S., Athol, Mass.
- Stearns, E. C. & Co., Syracuse, N. Y.
- Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O.
- U-Beam—Athol Machine & Foundry Co., Athol, Mass.

**VISES, MACHINISTS'.**

- Adams—The Adams Co., Dubuque, Ia.
- Ajax Oval Slide—G. M. Yost Mfg. Co., Meadville, Pa.
- Athol Machine & Foundry Co., Athol, Mass. Trade names—Athol, Standard, Starrett Patent, Simpson Quick Acting.



- Austin—Austin Tool & Machine Co., Inc., Pittsburg, Pa.  
 Barrett Machine Tool Co., Meadville, Pa.  
 Barnett Foundry & Machine Co., Irvington, N. J.  
 Brickner—The Sterling Emery Wheel Co., Tiffin, O.  
 ♦ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
 Erie Tool Works, The, Erie, Pa.  
 Fisher—Fisher & Norris, Trenton, N. J.  
 Fulton Star—Fulton Machine & Vise Co., Lowville, N. Y.  
 Gem—G. M. Yost Mfg. Co., Meadville, Pa.  
 G. S.—Germanow-Simon Machine Works, Rochester, N. Y.  
 ♦ Hall's Patent—The Charles Parker Co., Meriden, Conn.  
 Hercules—Bonney Vise & Tool Works, Allentown, Pa.  
 Hyde's—New London Vise Works, New London, Conn.  
 Keystone—Hollands Mfg. Co., Erie, Pa.  
 Mann Corporation, Kankakee, Ill.  
 Millers Falls Co., New York, N. Y.  
 Monarch—Prentiss Vise Co., New York, N. Y.  
 Morgan Vise Co., Chicago, Ill.  
 National Metal Products Co., Indianapolis, Ind.  
 Nichols, Wm. S., Hoosick Falls, N. Y.  
 ♦ Parker—The Charles Parker Co., Meriden, Conn.  
 Peerless—Fulton Machine & Vise Co., Lowville, N. Y.  
 Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
 Prentiss Bulldog—Prentiss Vise Co., New York, N. Y.  
 ♦ Rock Island Mfg. Co., Rock Island, Ill.  
 Star—Boker Cutlery & Hdwe. Co., Inc., New York, N. Y.  
 600—Athol Machine Co., Athol, Mass.  
 Smith Machine Co., H. B., Smithville, N. J.  
 Tiger, Universal—Emmert Mfg. Co., Waynesboro, Pa.  
 ♦ Utility—Brown Engineering Co., Reading, Pa.  
 Victor—Western Tool & Mfg. Co., Springfield, O.  
 Yankee—North Bros. Mfg. Co., Philadelphia, Pa.

#### VICES, FOR MILLING MACHINES AND DRILLS.

(See "Vises, for Drill Presses.")

#### VICES, FOR NICKEL AND BRASS PIPE.

- Crawford—Jos. H. Young Co., Boston, Mass.  
 Hollands—Hollands Mfg. Co., Erie, Pa.  
 Lockhart—R. Jas. Lockhart, Pittsburgh, Pa.  
 M. E. C.—Manufacturers Equipment Co., Chicago, Ill.  
 Reed—Reed Mfg. Co., Erie, Pa.  
 Steptoe, John, Co., Cincinnati, O.  
 Warnock—Warnock Mfg. Co., Worcester, Mass.  
 Wolverine—Wolverine Brass Works, Grand Rapids, Woodward-Wanger Co., Philadelphia, Pa.

#### VICES, OVAL SLIDE.

- Ajax—Yost Mfg. Co., Meadville, Pa.

#### VICES, PATTERNMAKERS.

(See also "Vises, Woodworkers.")

- Oliver Machinery Co., Grand Rapids, Mich.  
 Victor Tool Co., Waynesboro, Pa.

#### VICES, PIPE, CHAIN.

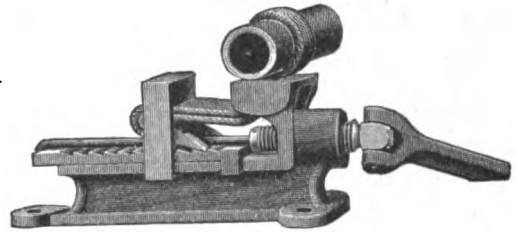
- Crown—Crown Die & Tool Co., Chicago, Ill.  
 Erie Tool Works, The, Erie, Pa.  
 Gerolo—Plymouth Mfg. Co., Chicago, Ill.  
 Nye—Nye Tool & Machine Works, Chicago, Ill.  
 ♦ Vulcan—J. H. Williams & Co., Brooklyn, N. Y.  
 Warren Tool & Forge Co., The, Warren, O.

#### VICES, PIPE, YOKE, HINGED AND SOLID.

(See also "Vises, Chain.")

- Armstrong Mfg. Co., The, Bridgeport, Conn.  
 Barrett Machine Tool Co., Meadville, Pa.  
 Cimax—The C. M. Kemp Mfg. Co., Baltimore, Md.  
 ♦ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
 Crane—Crane Co., Chicago, Ill.  
 Crane Valve Co., Bridgeport, Conn.  
 Crawford & Co., Chicago, Ill.  
 Crown—Crown Die & Tool Co., Chicago, Ill.  
 Dempster Mill Mfg. Co., Beatrice, Neb.  
 Dikeman Mfg. Co., The, Norwalk, Conn.  
 Erie Kit—Erie Tool Works, The, Erie, Pa.  
 Fulton—Fulton Machine & Vise Co., Lowville, N. Y.  
 Hinman—D. A. Hinman & Co., Sandwich, Ill.  
 Hull—Columbus Machine Co., Columbus, Ind.  
 Indispensable—Bonney Vise & Tool Co., Allentown, Pa.  
 Jacksons—Easton Tool & Machine Co., Easton, Pa.  
 Jarecki—Jarecki Mfg. Co., Erie, Pa.  
 Keystone—Hollands Mfg. Co., Erie, Pa.  
 Lord—The C. H. Yonts Co., Meadville, Pa.  
 Magic, Prentiss, Shepard, 20th Century—Prentiss Vise Co., New York, N. Y.  
 Mann Corporation, Kankakee, Ill.  
 Morgan Vise Co., Chicago, Ill.  
 Nye—Nye Tool & Machine Works, Chicago, Ill.  
 Oswego—The Oswego Tool Co., Oswego, N. Y.  
 ♦ Parker—The Chas. Parker Co., Meriden, Conn.  
 Phoenix—Phoenix Hardware Co., Buffalo, N. Y.

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The Best Yet. Sold Through Dealers.

Warnock Mfg. Co. . . . Worcester, Mass.

- Providence—General Fire Extinguisher Co., Providence, R. I.  
 Rapid Manufacturing Co., Grand Rapids, Mich.  
 ♦ Reed—Reed Mfg. Co., Erie, Pa. (self-locking).  
 ♦ Rock Island Mfg. Co., Rock Island, Ill.  
 St. Louis Sales Co., St. Louis, Mo. (rapid acting).  
 Searls—Spencer Regulator Co., Salem, Mass.  
 Smith—The H. B. Smith Mfg. Co., Westfield, Mass.  
 Starbuck—R. M. Starbuck & Sons, Hartford, Conn.  
 Steel & Tube Co. of America, Chicago, Ill.  
 ♦ Toledo—Toledo Pipe Threading Machine Co., The, Toledo, O. (hinged & solid).  
 Vanderman Mfg. Co., The, Willimantic, Conn.  
 ♦ Walworth—Walworth Mfg. Co., Boston, Mass.  
 Warnock Strap Vise—Warnock Mfg. Co., Worcester, Mass.  
 ♦ Wells—Greenfield Tap & Die Corp., Greenfield, Mass.  
 Whittington—Marx-Whittington Co., Easton, Pa.  
 Wolverine—Wolverine Brass Works, Grand Rapids.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Yost—Yost Mfg. Co., Meadville, Pa.

#### VICES, PNEUMATIC.

- Canton Pneumatic Tool Co., The, Canton, O.

#### VICES, PORTABLE.

- F. & R. Auto—Fulton Machine & Vise Co., Lowville, N. Y.  
 Fisher & Norris, Trenton, N. J.  
 ♦ Williams, J. H., & Co., Brooklyn, N. Y.

#### VICES, QUICK ACTION.

- Carter & Hakes Machine Co., The, Winsted, Conn.  
 Champion—William K. Aldrich Co., Lowell, Mass.  
 Emmert Mfg. Co., Waynesboro, Pa.  
 Fisher & Norris, Trenton, N. J.  
 Herriman—South Haven Foundry & Machine Co., South Haven, Mich.  
 Oliver Machinery Co., Grand Rapids, Mich.  
 Richards-Wilecox—Richards-Wilecox Mfg. Co., Aurora, Ill.  
 Roller Nut—Abernathy Vise & Tool Co., The, Chicago, Ill.  
 St. Louis Sales Co., St. Louis, Mo. (pipe).  
 Stephens Improved—G. M. Yost Mfg. Co., Meadville, Pa.  
 Toles, W. C., Co., Chicago, Ill.  
 Upton & Gilman Machine Co., Lowell, Mass.  
 Wayman & Gordon, Worcester, Mass.

#### VICES, RADIATOR.

- Peterson—The Illinois Iron & Bolt Co., Carpentersville, Ill.

#### VICES, RAILWAY.

- Fisher & Norris, Trenton, N. J.  
 ♦ Hollands—Hollands Mfg. Co., Erie, Pa.  
 Millers Falls Co., New York, N. Y.

#### VICES, SAW.

- All Steel, Never Break, Perfection—Clipper Tool Co., Buffalo, N. Y.  
 ♦ Atkins—E. C. Atkins Co., Indianapolis, Ind.  
 Bonney Forge & Tool Works, Allentown, Pa.  
 Buckeye Vise Co., Cleveland, O.  
 Clipper Tool Co., Buffalo, N. Y.  
 Dikeman All Steel—The Dikeman Mfg. Co., South Norwalk, Conn.  
 ♦ Disston & Sons, Inc., Henry, Philadelphia, Pa.  
 Edge, Frank, & Co., Grand Rapids, Mich.  
 Fulton Star—Fulton Machine & Vise Co., Lowville, N. Y.  
 Grammes, L. F., & Sons, Allentown, Pa.  
 ♦ Hargrave—The Cincinnati Tool Co., Cincinnati, O.



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Rearwin Spiral Emery  
Dresser Cutters

Machinery Company of America, Big Rapids, Mich.  
Moore Bros., Jamestown, N. Y.  
New Britain Machine Co., The, New Britain, Conn.  
Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
♦ Rock Island Mfg. Co., Rock Island, Ill.  
Stearns & Co., E. C., Syracuse, N. Y.

### VISES, SHAPER.

Oblique—Sellew Machine Tool Co., Pawtucket, R. I.  
Potter & Johnston Machine Co., Pawtucket, R. I.

### VISES, SPECIAL.

F. & R.—Boker Cutlery & Hardware Co., Inc., New York.

### VISES, SWIVEL.

Arpecc—Rogers, Prints & Co., Warren, Pa.  
F. & R. Patent—Fulton Machine & Vise Co., Lowville, N. Y.  
Fisher & Norris, Trenton, N. J.  
Fulton Star, F. & R. Patent—Fulton Machine & Vise Co., Lowville, N. Y.  
♦ Hollands—Hollands Mfg. Co., Erie, Pa.  
Jersey—Stanley Rule & Level Co., New Britain, Conn.  
Millers Falls Co., New York, N. Y.  
Moback Tool & Machine Mfg. Co., Boston, Mass.  
North Bros. Mfg. Co., Philadelphia, Pa.  
Parker—The Charles Parker Co., Meriden, Conn.  
Phoenix—Phoenix Hardware Mfg. Co., Buffalo, N. Y.  
Production—New Jersey Machinery Exchange, Newark, N. J.  
Reed Mfg. Co., Erie, Pa.  
♦ Rock Island—Rock Island Mfg. Co., Rock Island, Ill.  
Star—Boker Cutlery & Hdwe. Co., Inc., New York.  
Yost Swivel and Double Swivel—Yost Mfg. Co., Meadville, Pa.

### VISES, TOOLMAKERS.

Browne & Sharpe Mfg. Co., Providence, R. I.  
Fisher & Norris, Trenton, N. J.  
F. & R., Star—Boker Cutlery & Hardware Co., Inc., New York.  
Gem—J. E. Martin Tool & Die Co., Springfield, Ohio.  
♦ Hollands—Hollands Mfg. Co., Erie, Pa.  
♦ Parker's—The Charles Parker Co., Meriden, Conn.  
Prentiss Vise Co., New York, N. Y.  
Reed Mfg. Co., Erie, Pa.  
♦ Rock Island Mfg. Co., Rock Island, Ill.  
Tiger, Universal—Emmert Mfg. Co., Waynesboro, Pa.  
Yost's—Yost Mfg. Co., Meadville, Pa.

### VISES, V. GROOVE.

Kruger & Blind Co., Philadelphia, Pa.

### VISES, WOODWORKERS.

Boker Cutlery & Hdwe. Co., Inc., New York.  
Bonney Forge & Tool Works, Allentown, Pa.  
Bull Dog, Monarch, Shepard—Prentiss Vise Co., New York, N. Y.  
Carpenter—Will-Burt Co., The, Orville, O.  
♦ Columbian Hardware Div. of The Consolidated Iron-Steel Mfg. Co., Cleveland, O.  
Eureka, Universal, Tiger—Emmert Mfg. Co., Waynesboro, Pa.  
Fisher—Fisher & Norris, Trenton, N. J.  
Fulton Star, H. & R. Patent, Star—Fulton Machine & Vise Co., Lowville, N. Y.  
♦ Hollands, Keystone—Hollands Mfg. Co., Erie, Pa.  
Mann Corporation, Kankakee, Ill.  
Millers Falls Co., New York, N. Y.  
Morgan Vise Co., Chicago, Ill.  
National—National Metal Products Co., Indianapolis, Ind.  
Oliver Machinery Co., Grand Rapids, Mich.

♦ Parker Co., The Chas., Meriden, Conn.  
♦ Reed Mfg. Co., Erie, Pa.  
Rockford Mire Box Co., Rockford, Ill.  
♦ Rock Island Mfg. Co., Rock Island, Ill.  
Simpson Quick Acting—Athol Mach. & Foundry Co., Athol, Mass.  
Victor Tool Co., Waynesboro, Pa.  
Yost Quick Acting and Universal—Yost Mfg. Co., Meadville, Pa.

### VOLTMETERS.

Bristol's—The Bristol Co., Waterbury, Conn.  
General Electric Co., Schenectady, N. Y.  
International—Hoskins Mfg. Co., Detroit, Mich.  
Queen-Gray Co., Philadelphia, Pa.  
Roller-Smith Co., New York, N. Y.  
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

### VULCANIZERS.

Akron Rubber Mold & Machine Co., Akron, O.  
Akron-Williams—Williams Foundry & Machine Co., Akron, O.  
Allen Machine Co., Erie, Pa.  
Farrell Foundry & Machinery Co., Ansonia, Conn.  
Koven, L. O., & Bro., Jersey City, N. J.  
Miller, Chas. E., Anderson, Ind.  
Porcupine Company, Bridgeport, Conn.  
Premier It's It—Premier Electric Co., Chicago, Ill.  
Shaler, C. A., Co., Waupun, Wis.  
Smith, Samuel & Son Co., Paterson, N. J.  
Southark Foundry & Machine Co., Philadelphia, Pa.

### WAGONS, BRICK.

A. C. Co.—Arnold-Creager Co., The, New London, Ohio.

### WAGONS, COAL.

Akron Barrow Co., Cleveland, O.  
Conco—H. D. Conkey & Co., Mendota, Ill.

### WASHERS AND COOLERS, AIR.

Acme—Economy Pumping Machinery Co., Chicago, Ill.  
Alberger Heater Co., Buffalo, N. Y.  
Arctic Ice Machine Co., The, Canton, O.  
Atmospheric Conditioning Corp., Philadelphia, Pa.  
Baker Ice Machine Co., Omaha, Neb.  
Badger & Sons Co., E. B., Boston, Mass.  
Bi-cal-ky—Hersh & Brother, Allentown, Pa.  
Blomfeldt & Rapp Co., Chicago, Ill.  
♦ Buffalo Forge Co., Buffalo, N. Y.  
Carrier Air Conditioning Co., Buffalo, N. Y.  
♦ Carrier—Buffalo Forge Co., Buffalo, N. Y.  
Clarage Fan Co., Kalamazoo, Mich.  
Clark Dust Collecting Co., Chicago, Ill.  
Clayton Air Compressor Works, New York, N. Y.  
Connecticut Blower Co., Inc., The, Hartford, Conn.  
Cramer System—Parks Cramer Co., Charlotte, N. C.  
G. S.—Griscom Spencer Co., New York, N. Y.  
Held Co., The, Chicago, Ill.  
I. H. Co.—Ideal Heating Co., Brooklyn, N. Y.  
Kroeschell Bros. Ice Machine Co., Chicago, Ill.  
McCreery Engineering Co., Detroit, Mich.  
Peerless—New York Blower Co., Chicago, Ill.  
Schutte & Koerting Co., Philadelphia, Pa.  
♦ Sirocco—American Blower Co., Detroit, Mich.  
Sodemann Heat & Power Co., St. Louis, Mo.  
Spencer—Ingersoll-Rand Co., New York, N. Y.  
Spray Engineering Co., Boston, Mass.  
Sterling—Blomfeldt & Rapp Co., Chicago, Ill.  
Vilter Mfg. Co., The, Milwaukee, Wis.  
Wainwright—Alberger Pump & Condenser Co., New York.  
Worthington Pump & Machinery Corp., New York.  
Zellweger—J. Zellweger & Sons, St. Louis, Mo.

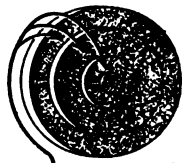
### WASHERS, ASBESTOS.

Algeo—Auburn Leather Goods Co., Auburn, N. Y.

LARGEST EXCLUSIVE MANUFACTURERS OF

LEATHER WASHERS IN THE UNITED STATES

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Three to five perfect washers

## Order Your Leather Washers From the Big Factory

Our modern facilities—our economic method of manufacture, enable us to furnish you with clean-cut leather washers and gaskets at the lowest possible price.

New customers are not put to any extra expense for dies, as our washers are cut by knives, revolving at high speed. These knives are adjusted in a few minutes to cut any size washer—without waste and without rough edges. And the customer gets the benefit of the extra quality and the saving in cost of manufacture. Write for our prices.

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Less waste by our system

Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Dominion Asbestos & Rubber Corp., New York.  
 Eagle—Eagle Packing & Rubber Co., New York, N. Y.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Rebels, L. J., New York, N. Y.  
 Simco—Simplex Mfg. Co., Auburn, N. Y.  
 U. S. Indestructible Gasket Co., New York.  
 Wearwell, Longwear—Wearwell Gasket & Packing Co., Camden, N. J.

### WASHERS, AUTOMOBILE, LEATHER

Fieldco—E. B. Field & Co., Worcester, Mass.  
 Leather Parts Co., Indianapolis, Ind.  
 Rockford Leather Washer Co., Rockford, Ill.  
 X-L—Excelsior Leather Washer Mfg. Co., Rockford, Ill.

### WASHERS, BALANCING, FOR BALANCING POLISHING WHEELS.

Munning-Loeb Co., Matawan, N. J.

### WASHERS, BARREL.

Rockford Leather Washer Co., Rockford, Ill.

### WASHERS, BASIN COCK AND WASTE.

See "Washers, Leather," "Fibre" and "Rubber.")

### WASHERS, BIRE.

(See "Washers, Fibre," "Leather" and "Rubber.")

### WASHERS, BRASS, COPPER, ALUMINUM, LEAD, TIN, ETC.

Acheson Mfg. Co., Braddock, Pa.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Casting & Mfg. Co., Brooklyn, N. Y.  
 American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 American Washer Works, Brooklyn, N. Y.  
 Ampinco—American Pin Co., Waterbury, Conn.  
 Barnes Co., The Wallace, Bristol, Conn.  
 Bettcher Stamping & Mfg. Co., Cleveland, Ohio.  
 Chicago Nut Co., Chicago, Ill.  
 Cleveland Wrought Products Co., Cleveland, O.  
 Cobb & Drew, Plymouth, Mass.  
 Doermann—Rohrer Co., Cincinnati, Ohio.  
 Globe—Globe Iron Roofing & Corrugating Co., Cincinnati, O.  
 Goetze—Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Grammes, L. F. & Sons, Allentown, Pa.  
 Harry Brothers Mfg. Co., Detroit, Mich.  
 Hobbs Mfg. Co., Worcester, Mass.  
 Hubbard, M. D., Mfg. Co., Pontiac, Mich.  
 Humphrey, H. W., Unionville, Conn.  
 Kales Stamping Co., Detroit, Mich.  
 Lathaw Steel & Metal Products Corp., New York, N. Y.  
 Massachusetts Machine Shop, Inc., Worcester, Mass.  
 Newport Rolling Mill Co., Newport, Ky.  
 New England Screw Co., Boston, Mass.  
 New Red—Garrison Brass & Machine Works, New York.  
 North Penn Washer Co., Philadelphia, Pa.  
 Pheoll Manufacturing Co., Chicago, Ill.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Positive—Positive Supply Co., Davenport, Ia.  
 Quadriga Mfg. Co., The, Chicago, Ill.  
 Raymond Lead Co., Chicago, Ill.  
 Rebels, L. J., New York, N. Y.  
 Richards, Benjamin, & Co., The, Winsted, Conn.  
 Right—The Gasket Supply Co., Philadelphia, Pa.  
 Russell Mfg. Co., The John M., Naugatuck, Conn.  
 St. Louis Screw Co., St. Louis, Mo.  
 Steward & Romaine Mfg. Co., Philadelphia, Pa.  
 Stimpson Co., Edwin B., Brooklyn, N. Y.

Syracuse Smelting Works, Brooklyn, N. Y.  
 United American Metals Corp., Brooklyn, N. Y.  
 United Lead Co., New York.  
 U. S. Indestructible Gasket Co., New York, N. Y.  
 ♦ Walworth Mfg. Co., Boston, Mass.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Wheeling Corrugating Co., Wheeling, W. Va.  
 Whitman—Whitman Metal Goods Co., Whitman, Mass.

### WASHERS, BRIDGE, MALLEABLE IRON.

Illinois Malleable Iron Co., Chicago, Ill.

### WASHERS, CAST IRON.

American Equipment Co., Norristown, Pa.  
 American Scale Co., Kansas City, Mo.  
 Ames, W. & Co., Jersey City, N. J.  
 Barnes Co., The Wallace, Bristol, Conn.  
 ♦ Bethlehem Steel Co., Bethlehem, Pa.  
 Buffalo Bolt Co., Buffalo, N. Y.  
 Clark Bros. Bolt Co., Milldale, Conn.  
 Columbus Bolt Works Co., Columbus, O.  
 Continental Bolt & Iron Works, Chicago, Ill.  
 Detroit Screw Works, Detroit, Mich.  
 Eddy Foundry Co., R. M., Chicago, Ill.  
 Hallett Iron Works, Harvey, Ill.  
 Hammond-Byrd Iron Co., Birmingham, Ala.  
 Hobbs Mfg. Co., Worcester, Mass.  
 Hoopes & Townsend Co., Philadelphia, Pa.  
 Hubbard Mfg. Co., M. D., Pontiac, Mich. (small).  
 Humphrey, H. W., Unionville, Conn.  
 Huntsville Foundry & Machine Works, Huntsville, Ala.  
 Lake Erie Iron Co., Cleveland, O.  
 Michigan Bolt & Nut Wks., Detroit, Mich.  
 Modern Iron Works, Quincy, Ill.  
 National Malleable Castings Co., Cleveland, O.  
 ♦ National Supply Co., The, Baltimore, Md.  
 O. G.—A. L. Swett Iron Works, Medina, N. Y.  
 Rockford Bolt Co., Rockford, Ill.  
 St. Louis Malleable Casting Co., St. Louis, Mo.  
 St. Louis Screw Co., St. Louis, Mo.  
 Specialty Bolt & Rivet Works, Sheldon, Conn.  
 Unity Mfg. Co., The, Cleveland, Ohio.  
 ♦ Upton Nut Co., The, Cleveland, O.  
 Western Automatic Machine Screw Co., The, Elyria, Ohio.

### WASHERS, CLOSET SCREW.

Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Berns Co., Otto, Newark, N. J.  
 Chicago Nut Co., Chicago, Ill.  
 Elgin Brass Co., New York, N. Y.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Russell, John M., Mfg. Co., Naugatuck, Conn.  
 Simco—Simplex Mfg. Co., Auburn, N. Y.  
 Waterbury Mfg. Co., Waterbury, Conn.  
 Weilverine Brass Works, Grand Rapids, Mich.

### WASHERS, (AND JIGS), COAL.

Link-Belt Company, Chicago and Philadelphia.  
 McLanahan-Stone Co., Hollidaysburg, Pa.

### WASHERS, COIL.

Excelsior Leather Washer Mfg. Co., Rockford, Ill.

### WASHERS, COUNTERSUNK.

American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 Massachusetts Machine Shop, Inc., Worcester, Mass.

### WASHERS, ELEVATOR BUCKET.

Forest City Leather Washer Co., Rockford, Ill.  
 Rockford Leather Washer Co., Rockford, Ill.

### WASHERS, FELT AND FABRIC.

Advance Felt Cutting Co., Chicago, Ill.  
 Algeo—Auburn Leather Goods Co., Auburn, N. Y.



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American Washer Works, Brooklyn, N. Y.  
Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
Booth—The Booth Felt Co., Brooklyn, N. Y.  
Brawley, T. R., Brooklyn, N. Y.  
Braunsdorf, Geo. W., New York, N. Y.  
Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
Fieldco—R. B. Field & Co., Worcester, Mass.  
Goepel, C. F., & Co., New York, N. Y.  
Hoffeld, R., & Co., Buffalo, N. Y.  
House & Sons, Chas. W., Unionville, Conn.  
Lyons Felt Co., Brooklyn, N. Y.  
Miller & West, Dedham, Mass.  
Mitchell & Son, Brooklyn, N. Y.  
New York Washer Works, New York, N. Y.  
Quadruga Mfg. Co., The, Chicago, Ill.  
Rebele, L. J., New York, N. Y.  
Simco—Simplex Mfg. Co., Auburn, N. Y.  
Simplex Mfg. Co., Auburn, N. Y.  
Star Felt Cutting Co., The, Brooklyn, N. Y.  
Sutherland Leather & Felt Co., Detroit, Mich.  
U. S. Indestructible Gasket Co., New York.

### WASHERS, FIBRE, HARD.

Adams, C. F., Fort Worth, Tex.  
Advance Felt Specialty & Cutting Co., Chicago, Ill.  
American Vulcanized Fibre Co., Wilmington, Del.  
American Washer Works, Brooklyn, N. Y.  
Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass. (hard and flexible).  
Best Mfg. Co., Cleveland, O.  
Brawley, T. R., Brooklyn, N. Y. (flexible).  
Bunnell, W. H., New York, N. Y.  
Continental Fibre Co., Newark, Del.  
Delaware Hard Fibre Co., Wilmington, Del.  
Diamond State Fibre Co., Bridgeport, Pa.  
Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
Fieldco—R. B. Field & Co., Worcester, Mass.  
Flexo—Woodward-Wanger Co., Philadelphia, Pa.  
Frank Bros., New York, N. Y.  
Good Mfg. Co., Inc., New York, N. Y.  
Humphrey, H. W., Unionville, Conn.  
Miller & West, Dedham, Mass.  
Mitchell & Son, Brooklyn, N. Y.  
Phoenix Specialty Mfg. Co., New York, N. Y.  
Quadruga Mfg. Co., The, Chicago, Ill.  
Rebele, L. J., New York, N. Y.  
Rhode Island Washer Co., Valley Falls, R. I.  
Right—The Gasket Supply Co., Philadelphia, Pa.  
Standard Fibre Co., Somerville, Mass.  
U. S. Indestructible Gasket Co., New York.

Vellumoid—Fibre Finishing Co., Worcester, Mass.  
Wilmington Fibre Specialty Co., Wilmington, Del.

### WASHERS AND GASKETS, GAGE GLASS.

Acme Bulb—Gilbert & Co., Hyattsville, Md.  
Alblon—Alblon Mfg. Co., Seattle, Wash.  
Algo—Auburn Leather Goods Co., Auburn, N. Y.  
Boston Belting Co., Boston, Mass.  
Bowers Rubber Works, San Francisco, Cal.  
Brooks—L. I. Breaky, Marshall, Mich.  
Canfield Rubber Co., The, Bridgeport, Conn.  
Cincinnati Gasket & Packing Co., Cincinnati, O.  
Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
Combination Rubber Mfg. Co., The, Bloomfield, N. J.  
Diamond Rubber Co., Akron, O.  
Dominion Asbestos & Rubber Corp., New York.  
Double Service Packing Co., Philadelphia, Pa.  
Durabia Mfg. Co., New York, N. Y.  
General Asbestos & Rubber Co., Charleston, S. C.  
Gilbert's—R. F. Morse Co., Providence, R. I.  
Hudson Mechanical Rubber Co., New York, N. Y.  
Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.  
Jenkins Bros.—Jenkins Bros., New York, N. Y.  
Johnson, Henry, Co., The, Jersey City, N. J.  
Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
Liberty Mfg. Co., The, East Norwalk, Conn.  
Lonergan, J. E., Co., Philadelphia, Pa.  
Lubron Co., The, Everett, Mass.  
McBee & Roberts Co., The, Detroit, Mich.  
Marvel—Joseph Allen, Collingswood, N. J.  
Marvel—La Favorite Rubber Mfg. Co., Paterson, N. J.  
Mikesell Brothers Co., Chicago, Ill.  
New York Belting & Packing Co., New York, N. Y.  
Perfect—H. O. Canfield Co., Bridgeport, Conn.  
Perry's—La Favorite Rubber Mfg. Co., Paterson, N. J.  
Quaker City Rubber Co., Philadelphia, Pa.  
Red Fox—H. O. Canfield Co., Bridgeport, Conn.  
Rockford Leather Washer Co., Rockford, Ill.  
Sallsbury & Co., Inc., W. H., Chicago, Ill.  
Self-Packing—Crandall Packing Co., Palmyra, N. Y.  
Simco—Simplex Mfg. Co., Auburn, N. Y.  
Standard Packings Co., Marion Bldg., Cleveland, O.  
United States Rubber Co., Mechanical Goods Div., New York, N. Y.  
Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.

### WASHERS, GALVANIZED.

American Nut & Bolt Fastener Co., Pittsburg, Pa.  
Bethlehem Steel Co., Bethlehem, Pa.  
Fieldco—R. B. Field & Co., Worcester, Mass.  
Oliver Iron & Steel Co., Pittsburg, Pa.  
St. Louis Screw Co., St. Louis, Mo.

### WASHERS, GAS METER AND WATER METER.

Fieldco—R. B. Field & Co., Worcester, Mass.  
Rockford Leather Washer Co., Rockford, Ill.  
Simon, Buhler & Baumann, Inc., New York, N. Y.  
Western Gas Construction Co., Ft. Wayne, Ind.

### WASHERS, ROSE.

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
Best Mfg. Co., Cleveland, O.  
Booth—The Booth Felt Co., Brooklyn, N. Y.  
Boston Belting Co., Boston, Mass.  
Canfield, The H. O. Co., Bridgeport, Conn.  
Canfield Rubber Co., The, Bridgeport, Conn.  
Cincinnati Rubber Mfg. Co., The, Cincinnati, O.  
Diamond Rubber Co., Inc., Akron, O.  
Dominion Asbestos & Rubber Corp., New York.  
Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
Forest City Leather Washer Co., Rockford, Ill.  
Lubron Co., The, Everett, Mass.  
Maquire Rubber Co., New York, N. Y.  
McDonald Mfg. Co., A. Y., Dubuque, Ia.  
Marston, I. G., & Co., Boston, Mass.  
Mitchell & Son, Brooklyn, N. Y.  
Neverloose—H. Mueller Mfg. Co., Decatur, Ill.  
New York Belting & Packing Co., New York, N. Y.  
Norwalk Mfg. Co., East Norwalk, Conn.  
Pioneer Rubber Mills, San Francisco, Calif.  
Quadruga Mfg. Co., The, Chicago, Ill.  
Quaker City Rubber Co., Philadelphia, Pa.  
Rebele, L. J., New York, N. Y.  
Rockford Leather Washer Co., Rockford, Ill.  
Sallsbury & Co., Inc., W. H., Chicago, Ill.  
Simco—Simplex Mfg. Co., Auburn, N. Y.  
United State Rubber Co., Mechanical Goods Div., New York, N. Y.  
Woodward-Wanger Co., Philadelphia, Pa.

### WASHERS, HYDRANT VALVE.

Canfield Rubber Co., The, Bridgeport, Conn.  
Dominion Asbestos & Rubber Corp., New York.  
Kupferle, John C., Foundry Co., St. Louis, Mo.  
Rockford Leather Washer Co., Rockford, Ill.

### WASHERS, LEATHER AND RAWHIDE.

Adams, C. F., Fort Worth, Tex.  
Advance Felt Specialty & Cutting Co., Chicago, Ill.

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 American Washer Works, Brooklyn, N. Y.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Best Leather Nut Co., Stoneham, Mass.  
 Best Mfg. Co., Cleveland, O.  
 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Bright, H. L. Co., Canton, Mass.  
 Champion—Providence Belting Co., Providence, R. I.  
 Chibeco—Chicago Belting Co., Chicago, Ill.  
 Chicago Rawhide Co., Chicago, Ill.  
 Consolidated Belting Co., Chester, Pa.  
 Davis, John C., Rochester, N. Y.  
 Delaware Hard Fibre Co., Wilmington, Del.  
 Detroit Leather Specialty Co., Inc., Detroit, Mich.  
 Duckwall Belting & Hose Co., Indianapolis, Ind.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Forest City Leather Washer Co., Rockford, Ill.  
 Frank Bros., New York, N. Y.  
 Good Mfg. Co., Inc., New York, N. Y.  
 ♦ Graton & Knight Mfg. Co., Worcester, Mass.  
 Helland's—Geo. W. Helland, New York.  
 Hoffeld & Co., R., Buffalo, N. Y.  
 Hudson Belting Co., Worcester, Mass.  
 Illinois Mechanical Leather Co., Chicago, Ill.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Kendrick Valve & Washer Co., Syracuse, N. Y.  
 ♦ Ladew, Edward R., Estate, Glen Cove, N. Y.  
 Leather Parts Co., Indianapolis, Ind.  
 Marsh, Chas. W. Co., Muskegon, Mich.  
 Marston, I. G., & Co., Boston, Mass.  
 New Red—Garrison Brass & Machine Works, New York.  
 New York Leather Belting Co., Brooklyn, N. Y.  
 Nott, W. S. Co., Minneapolis, Minn.  
 ♦ Page Belting Co., Concord, N. H.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Quadriga Mfg. Co., The, Chicago, Ill.  
 Rahmann, Geo. & Co., New York, N. Y.  
 Rebele, L. J., New York, N. Y.  
 Reinhold Belting & Supply Co., Inc., Brooklyn, N. Y.  
 Rhode Island Washer Co., Valley Falls, N. Y.  
 Right—The Gasket Supply Co., Philadelphia, Pa.  
 Rockford Leather Washer Co., Rockford, Ill.  
 ♦ Schieren—Chas. A. Schieren & Co., New York (leather).  
 Simco—Simplex Mfg. Co., Auburn, N. Y.  
 Stevens Co., Chas. L., Detroit, Mich.  
 Sutherland Leather & Felt Co., Detroit, Mich.  
 U. S. Indestructible Gasket Co., New York.  
 Victor—New York Washer Works, New York, N. Y.  
 Vim—E. F. Houghton & Co., Philadelphia, Pa.  
 Voelkner & Harry Mfg. Co., Detroit, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**WASHERS, LOCK.**

American Spring—American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
 The Cassidy-Fairbanks Mfg. Co., Chicago, Ill.  
 Hearnley Machine Variety Iron & Tool Works, Toledo, Ohio.  
 Hobbs Mfg. Co., Worcester, Mass.  
 Mansfield Lock Washer Co., Mansfield, O.  
 National Lock Washer Co., Newark, N. J.  
 Never Slip—Tucker Tool & Machine Co., New York.  
 Red Devil—Abrasive Machine Co., Irvington, N. J.  
 ♦ Reliance—Reliance Mfg. Co., Massillon, O.  
 Spillman—Clendennin Bros., Baltimore, Md.  
 St. Louis Screw Co., St. Louis, Mo.  
 The Positive Lock Washer Co., Newark, N. J.  
 The Wire Goods Co., Worcester, Mass.  
 Torsion—Torsion Nut-Lock & Washer Co., Boston.  
 Verona Tool Works, Pittsburgh, Pa.

**WASHERS, NAIL HEAD AND ROOFING.**

Colorado Lead Works Co., The, Denver, Colo.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Hoyt Metal Co., St. Louis, Mo.  
 Lyon, Conklin & Co., Inc., Baltimore, Md.  
 Mobile Steel Co., Mobile, Ala.  
 Red Devil—Smith & Hemenway Co., Inc., Irvington, N. J.  
 Rockford Leather Washer Co., Rockford, Ill.  
 U. S. Indestructible Gasket Co., New York, N. Y.

**WASHERS, OIL CAN, GREASE CUP.**

Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Forest City Leather Washer Co., Rockford, Ill.  
 Rockford Leather Washer Co., Rockford, Ill.  
 Simco—Simplex Mfg. Co., Auburn, N. Y.

**WASHERS, OIL CUP, CORK.**

Essex Brass Corp., Detroit, Mich.

**WASHERS, PASTERBOARD, PAPER AND CORE.**

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 Algo—Auburn Leather Goods Co., Auburn, N. Y.

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 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Davis, John C., Rochester, N. Y.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Goetze Gasket & Packing Co., New Brunswick, N. J.  
 Judd & Leland Mfg. Co., Clifton Springs, N. Y.  
 Phoenix Specialty Mfg. Co., New York, N. Y.  
 Rebele, L. J., New York, N. Y.  
 Rockford Leather Washer Co., Rockford, Ill.  
 Simco—Simplex Mfg. Co., Auburn, N. Y.

**WASHERS, PUMP.**

Adams, C. F., Fort Worth, Tex.  
 Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 American Washer Works, Brooklyn, N. Y.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Best Mfg. Co., Cleveland, O.  
 Chicago Belting Company, Chicago, Ill.  
 Excelsior Leather Washer Mfg. Co., Rockford, Ill.  
 Fieldco—E. B. Field & Co., Worcester, Mass.  
 Frank Bros., New York, N. Y.  
 Forest City Leather Washer Co., Rockford, Ill.  
 Kendrick Valve & Washer Co., Syracuse, N. Y.  
 ♦ Page Belting Co., Concord, N. H.  
 Quadriga Mfg. Co., The, Chicago, Ill.  
 Simco—Simplex Mfg. Co., Auburn, N. Y.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**WASHERS, RAWHIDE.**

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Booth—The Booth Felt Co., Brooklyn, N. Y.  
 Chicago Rawhide Mfg. Co., The, Chicago, Ill.  
 U. S. Indestructible Gasket Co., New York.

**WASHERS, RUBBER.**

Algo—Auburn Leather Goods Co., Auburn, N. Y.  
 American Brass Novelty Co., Grand Haven, Mich.  
 Barwood—The L. J. Barwood Mfg. Co., Stoneham, Mass.  
 Bell—Estate of Andrew Bell, Newark, N. J.



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Trade-Mark

# The Celebrated BELL WASHERS

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"THE BELL"



Trade-Mark

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- Boss—The B. F. Goodrich Co., Akron, O.
- ◆ Boston Belting Co., Boston, Mass.
- Bunnell, W. H., New York, N. Y.
- Canfield, The H. O., Co., Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn.
- ◆ Cincinnati Rubber Mfg. Co., The, Cincinnati, O.
- Cad—Standard Shop Equipment Co., Philadelphia, Pa.
- Coleman's—Allan J. Colemans, Chicago, Ill. (bibb).
- ◆ Combination Rubber Mfg. Co., The, Bloomfield, N. J.
- Delaware Hard Fibre Co., Wilmington, Del.
- Diamond Rubber Co., The, Akron, O.
- Dominion Asbestos & Rubber Corp., New York.
- Double Service Packing Co., Philadelphia, Pa.
- Frank Bros., New York, N. Y.
- ◆ Goodrich, B. F. Goodrich Rubber Co., Akron, O.
- ◆ Goodyear Tire & Rubber Co., Akron, Ohio.
- Hoffeld, R. & Co., Buffalo, N. Y.
- Holland Rubber Co., New York, N. Y.
- Hudson Mechanical Rubber Co., New York, N. Y.
- Indiana Rubber & Insulated Wire Co., Jonesboro, Ind.
- ◆ Jenkins Bros.—Jenkins Bros., New York, N. Y.
- Johnson Co., The Henry, Jersey City, N. J.
- Kendrick Valve & Washer Co., Syracuse, N. Y.
- Marston & Co., I. G. Boston, Mass.
- M. B.—Montgomery Bros., Inc., Philadelphia, Pa.
- Miller & West Co., Dedham, Mass.
- Mitchell & Son, Brooklyn, N. Y.
- Mulconroy Co., Inc., Philadelphia, Pa.
- ◆ New Jersey Car Spring & Rubber Co., Jersey City, N. J.
- ◆ New York Belting & Packing Co., New York, N. Y.
- New York Rubber Disc Co., New York, N. Y.
- Norwalk Mfg. Co., East Norwalk, Conn.
- Our Own—The H. O. Canfield Co., Bridgeport, Conn.
- Phoenix Specialty Mfg. Co., New York, N. Y.
- Quaker City Rubber Co., Philadelphia, Pa.
- Rebele, L. J., Inc., New York, N. Y.
- ◆ Republic Rubber Corp., The, Youngstown, O.
- Schacht Mfg. Co., Huntington, Ind.
- Standard Nut & Bolt Co., Valley Falls, R. I.
- ◆ Sterling—Boston Woven Hose & Rubber Co., Cambridge, Mass.
- Tribune—Continental Rubber Works, Erie, Pa.
- Union Rubber & Asbestos Co., Trenton, N. J.
- ◆ United & Globe Rubber Mfg. Co., Trenton, N. J.
- ◆ United States Rubber Co., Mechanical Goods Div., New York, N. Y.

Wilbow—Williams-Bowman Rubber Co., Cicero, Ill.  
Wolverine Brass Works, Grand Rapids, Mich.  
Woodward-Wanger Co., Philadelphia, Pa.

#### WASHERS, SAND AND GRAVEL.

Link-Belt Company, Chicago and Philadelphia.

#### WASHERS, SIPHON VALVE.

- Algo—Auburn Leather Goods Co., Auburn, N. Y.
- Barwood—The I. J. Barwood Co., Stoneham, Mass.
- Canfield—The H. O. Canfield Co., Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn.
- Durst Mfg. Co., The, New York, N. Y.
- Fieldco—R. B. Field & Co., Worcester, Mass.
- Frank Bros., New York, N. Y.
- Forest City Leather Washer Co., Rockford, Ill.
- Good Mfg. Co., Inc., New York, N. Y.
- ◆ Goodrich—B. F. Goodrich Co., Akron, O.
- Hoffeld, R. & Co., Buffalo, N. Y.
- Liberty Mfg. Co., The, East Norwalk, Conn.
- Tribune—Continental Rubber Works, Erie, Pa.
- ◆ United States Rubber Co., Mechanical Goods Div., New York, N. Y.
- Williams-Bowman Rubber Co., Cicero, Ill.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

#### WASHERS, SLIP JOINT.

- Algo—Auburn Leather Goods Co., Auburn, N. Y.
- American Brass Novelty Co., Grand Haven, Mich.
- Best Mfg. Co., Cleveland, O.
- Canfield, The H. O., Co., Bridgeport, Conn.
- Canfield Rubber Co., The, Bridgeport, Conn.
- Frank Bros., New York, N. Y.
- Liberty Mfg. Co., The, East Norwalk, Conn.
- Quaker City Rubber Co., Philadelphia, Pa.
- Simco—Simplex Mfg. Co., Auburn, N. Y.
- Tribune—Continental Rubber Works, Erie, Pa.
- ◆ United States Rubber Co., Mechanical Goods Div., New York, N. Y.
- Wolverine Brass Works, Grand Rapids, Mich.
- Woodward-Wanger Co., Philadelphia, Pa.

#### WASHERS, SPACING, STEEL.

Unity Mfg. Co., The, Cleveland, Ohio.

#### WASHERS, SPRING TEMPERED.

Barnes Co., The Wallace, Bristol, Conn.



Dunbar Bros., Bristol, Conn.  
Mansfield Lock Washer Co., Mansfield, Ohio.

**WASHERS, SPUD, WATER CLOSET.**

Canfield Rubber Co., The, Bridgeport, Conn.  
Canfield, The H. O. Co., Bridgeport, Conn.  
Durst Mfg. Co., The, New York, N. Y.  
Fieldco—B. B. Field & Co., Worcester, Mass.  
Frank Bros., New York, N. Y.  
♦ Goodrich—B. F. Goodrich Co., Akron, O.  
Liberty Mfg. Co., The, East Norwalk, Conn.  
Sexauer, J. A., Mfg. Co., New York.  
Woodward-Wanger Co., Philadelphia, Pa.  
Williams-Bowman Rubber Co., Cicero, Ill.

**WASHERS, STEEL.**

Allegheny Steel Co., Pittsburg, Pa.  
American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
♦ Bethlehem Steel Co., Bethlehem, Pa.  
Cincinnati—The Cincinnati Ball Crank Co., Cincinnati, O. (finished)  
Cleveland Wrought Products Co., Cleveland, O.  
Cressman, E. C., Co., Philadelphia, Pa.  
Gasket Supply Co., The, Philadelphia, Pa.  
Good Mfg. Co., Inc., New York, N. Y.  
Hall's Sons, Samuel, New York, N. Y.  
Harry Brothers Mfg. Co., Detroit, Mich.  
Haskell, Wm. H., Mfg. Co., The, Pawtucket, R. I.  
Hobbs Mfg. Co., Worcester, Mass.  
Humphrey, H. W., Unionville, Conn.  
Massachusetts Machine Shop Co., Worcester, Mass.  
Never-Break—The Avery Stamping Co., Cleveland, O.  
New England Bolt & Steel Co., Everett, Mass.  
North Penn Washer Co., Philadelphia, Pa.  
♦ Oliver Iron & Steel Co., Pittsburgh, Pa.  
Phoenix Specialty Mfg. Co., New York, N. Y.  
Pioneer Rubber Mills, San Francisco, Calif.  
Quadrige Mfg. Co., The, Chicago, Ill.  
Republic Iron & Steel Co., Youngstown, O.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
St. Louis Screw Co., St. Louis, Mo.  
Stanley Works, The, New Britain, Conn.  
U. S. Indestructible Gasket Co., New York.  
Western Automatic Machine Screw Co., Elyria, Ohio.

**WASHERS, STREET.**

(See also "Hydrants.")

Acme—N. O. Nelson Mfg. Co., St. Louis, Mo.  
Alaska—American Foundry & Mfg. Co., St. Louis, Mo.  
American—American Foundry & Mfg. Co., St. Louis.  
Barnes Mfg. Co., The, Mansfield, O.  
Buckeye—Mast, Foss & Co., Springfield, O.  
California—John C. Kupferle Foundry Co., St. Louis.  
California—American Foundry & Mfg. Co., St. Louis.  
Chapman—J. B. Hauer, Brooklyn, N. Y.  
Clow—James B. Clow & Sons, Chicago, Ill.  
Crane Co., Chicago, Ill.  
Crescent, No-Shock, Star, Sun—The Goulds Mfg. Co., Seneca Falls, N. Y.  
Douglas—W. & B. Douglas, Middletown, Conn.  
Empire—American Foundry & Mfg. Co., St. Louis, Mo.  
Hawkeye—Chandler Pump Co., Cedar Rapids, Ia.  
Humphreys Mfg. Co., The, Mansfield, O.  
M. Pattern—Illinois Malleable Iron Co., Chicago, Ill.  
McNamara—American Foundry & Mfg. Co., St. Louis.  
♦ McNamara Original—Hays Mfg. Co., Erie, Pa.  
McNamara—John C. Kupferle Foundry Co., St. Louis.  
Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
Murdoch—American Foundry & Mfg. Co., St. Louis.  
Genuine Murdoch—The Murdoch Mfg. & Supply Co., Cincinnati, O.  
Murdoch Pattern—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
National—American Foundry & Mfg. Co., St. Louis.  
Nelson Compression—N. O. Nelson Mfg. Co., St. Louis.  
Nichol & Co., Thos. J., Cincinnati, O.  
Richardson Brass Co., Edro, Baltimore, Md.  
Savill's, Thomas, Sons, Philadelphia, Pa.  
Star—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
T. E.—American Foundry & Mfg. Co., St. Louis, Mo.  
Total Eclipse—John C. Kupferle Foundry Co., St. Louis, Mo.

**WASHERS & TESTERS, LOCOMOTIVE BOILER.**

Edna Brass Mfg. Co., The, Cincinnati, Ohio.

**WASHERS, THRUST (SHAFT).**

Nolu—Nolu Oilless Bearing Co., Philadelphia, Pa.

**WASHERS, TRAP.**

Field, B. B., & Co., Worcester, Mass.

**WASHERS, UNION.**

Barwood, L. J., Mfg. Co., Stoneham, Mass.  
Canfield Rubber Co., The, Bridgeport, Conn.  
Fieldco—B. B. Field & Co., Worcester, Mass.  
Rockford Leather Washer Co., Rockford, Ill.  
Sexauer, J. A., Mfg. Co., New York.  
Simco—Simplex Mfg. Co., Auburn, N. Y.

**WASHERS, VEHICLE, OVERHEAD.**

Broad Gauge Iron Works, Boston, Mass.  
Butt's—Nolan & Bien, Boston, Mass.  
Delaware Hard Fibre Co., Wilmington, Del.  
Ellis Pat.—The John Wieben Co., New York, N. Y.  
Foreman, L. T., Omaha, Neb.  
Hanley Economical—S. V. Hanley, Milwaukee, Wis.  
Ideal—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
Monitor—Rhodes Mfg. Co., Hartford, Conn.  
Muller Reliable—Muller, Edward, North Bergen, N. J.  
Peoria—The Illinois Pump & Brass Co., Peoria, Ill.  
Perfect—Perfect Manufacturing Co., Albany, N. Y.  
Perfection—Ryan & Long, Appleton, Wis.  
Saxon—J. D. Johnson Co., Philadelphia, Pa.  
Star Brass Works, Chicago, Ill.  
♦ Walworth—Walworth Co., Boston, Mass.  
Westchester—W. A. Raban, Port Chester, N. Y.  
Western—Western Robe Mills, Chicago, Ill.

**WASHERS, WASTE AND OVERFLOW, RUBBER.**

El Transit, Electric, Ideal, Model, Unique—Canfield Rubber Co., Bridgeport, Conn.

**WASHERS, WOOD.**

Migrum—Bound Brook Oil-Less Bearing Co., Bound Brook, N. J.

**WASHERS, WROUGHT IRON.**

Allegheny Steel Co., Brackenridge, Pa.  
♦ American Bolt Co., Birmingham, Ala.  
American Equipment Co., Norristown, Pa.  
♦ American Iron & Steel Mfg. Co., Lebanon, Pa.  
American Nut & Bolt Fastener Co., Pittsburgh, Pa.  
Ames, W. & Co., Jersey City, N. J.  
Barber & Co., Chicago, Ill.  
Bettcher Stamping & Mfg. Co., Cleveland, O.  
♦ Bourne-Fuller Co., The, Cleveland, O.  
Bremen Metal Stamping Co., Logan, O.  
♦ Clark Bros. Bolt Co., Milldale, Conn.  
Cleveland Wrought Washer Co., Cleveland, O.  
Continental Bolt & Iron Works, Chicago, Ill.  
Dayton Malleable Iron Co., Dayton, Ohio.  
Delaware Steel Co., New York, N. Y.  
Eastern Bolt & Nut Co., Providence, R. I.  
Fieldco—B. B. Field & Co., Worcester, Mass.  
Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
♦ Graham Nut Co., Pittsburgh, Pa.  
Griffin Mfg. Co., The, Erie, Pa.  
♦ Haskell Mfg. Co., W. H., Pawtucket, R. I.  
Hitner's, Henry A., Sons Co., Philadelphia, Pa.  
Hoopes & Townsend Co., Philadelphia, Pa.  
♦ Hubbard & Co., Pittsburgh, Pa.  
Illinois Malleable Iron Co., Chicago, Ill.  
Joliet Wrought Washer Co., Joliet, Ill.  
♦ Lamson & Sessions Co., Cleveland, O.  
Lanman Co., E. B., East Chicago, Ind.  
Lathaw Steel & Metal Products Corp., New York, N. Y.  
Michigan Bolt & Nut Works, Detroit, Mich.  
National Malleable Casting Co., Cleveland, O.  
♦ National Supply Co., The, Baltimore, Md.  
Neely Nut & Bolt Co., Pittsburgh, Pa.  
Nicolet Plate Washer Co., Philadelphia, Pa.  
North Penn Washer Co., Philadelphia.  
Orcutt—The Toledo Washer & Stamping Co., Toledo, O.  
Pheoli Mfg. Co., Chicago, Ill.  
♦ Reliable Mfg. Co., Massillon, O.  
Republic Iron & Steel Co., Youngstown, O.  
Rockford Bolt Co., Rockford, Ill.  
Stanley Works, The, New Britain, Conn.  
St. Louis Screw Co., St. Louis, Mo.  
Topping Bros., New York, N. Y.  
Tucker Tool & Machine Co., New York, N. Y.  
U. S. Indestructible Gasket Co., New York.  
Western Wrought Washer Co., Los Angeles, Cal.  
Whitman—Whitman Metal Goods Co., Whitman, Mass.  
Wrought Washer Mfg. Co., Milwaukee, Wis.

**WASTE, COTTON (WIPING).**

American Mills Co., Atlanta, Ga.  
American Supply Co., Chicago, Ill.  
Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.  
Bishop, Robert, Mfg. Co., Boston, Mass.  
Blakeley, John, & Sons, Philadelphia, Pa.  
Burstein, Meyer & Sons, Neenah, Wis.  
Chicago Waste Co., Chicago, Ill.  
Cincinnati Oil Works Co., Cincinnati, O.  
Clapp, Harry D. B., & Co., Inc., Philadelphia, Pa.  
Corr, Patrick & Sons, Philadelphia, Pa.  
Detroit Waste Works, Detroit, Mich.  
Egan, K. Francis X., Corp., Brooklyn, N. Y.  
Economy Wiping Materials Co., Inc., New York.  
Estes Mills, Fall River, Mass.  
Fidelity Brand—Hagy Waste Works, The J. Milton, Philadelphia, Pa.  
Frankford Waste Co., Philadelphia, Pa.  
Hill & Cutler, Boston, Mass.  
Hoffman-Corr Mfg. Co., New York, N. Y.  
Joliet Textile Mills, Inc., Joliet, Ill.  
Lillie, Dexter P., Co., Indian Orchard, Mass.  
Massasoit Mfg. Co., Fall River, Mass.

Miller Waste Mfg. Co., Inc., Philadelphia, Pa.  
 New York Cordage Co., New York, N. Y.  
 O'Neill Bros., Philadelphia, Pa.  
 Pittsburgh Waste Co., Pittsburgh, Pa.  
 Railway Supplies & Mfg. Co., Cincinnati, O.  
 Remick, T., & Co., Boston, Mass.  
 Riverside Mills, Augusta, Ga.  
 Robinson, D., & Sons, Detroit, Mich.  
 Royal—Royal Mfg. Co., Rahway, N. J.  
 Rumsey, W. Co., The, Romeo, Mich.  
 Sawco—South Atlantic Waste Co., Inc., Charlotte, N. C.  
 ♦ Springfield Waste Co., Springfield, Mass.  
 Standard Waste Mfg. Co., Cleveland, O.  
 St. Louis Malleable Casting Co., St. Louis, Mo.  
 Sweetland Waste Co., South Boston, Mass.  
 The Special Products Co., Hopewell, Va.  
 Webb, Chas. J., Co., Philadelphia, Pa.

#### WASTE, WOOLEN (PACKING).

American Mills Co., Atlanta, Ga.  
 Bishop, Robert, Mfg. Co., Boston, Mass.  
 Blakeley, John, & Sons, Philadelphia, Pa.  
 Burstein, Meyer & Sons, Neenah, Wis.  
 Chicago Waste Co., Chicago, Ill.  
 Clapp, Harry D. B., & Co., Philadelphia, Pa.  
 Corr, Patrick & Sons, Inc., Philadelphia, Pa.  
 Fidelity Brand—The J. Milton Hagy Waste Works, Inc., Philadelphia, Pa.  
 Frankford Waste Co., Philadelphia, Pa.  
 Hoffman-Corr Mfg. Co., New York.  
 Lillie, Dexter P. Co., Indian Orchard, Mass.  
 Massasott Mfg. Co., Fall River, Mass.  
 Miller Waste Mfg. Co., Inc., Philadelphia, Pa.  
 O'Neill Bros., Philadelphia, Pa.  
 Perfection—Franklin Mfg. Co., Franklin, Pa.  
 Pittsburgh Waste Co., Pittsburgh, Pa.  
 Railway Supplies & Mfg. Co., Cincinnati, O.  
 Riverside Mills, Augusta, Ga.  
 Robinson, D., & Sons, Detroit, Mich.  
 Royal—Royal Mfg. Co., Rahway, N. J.  
 Rumsey, W. Co., The, Romeo, Mich.  
 South Atlantic Waste Co., Inc., Charlotte, N. C.  
 ♦ Springfield Waste Co., Springfield, Mass.  
 Standard Waste Co., Philadelphia, Pa.  
 Sykes, David, Philadelphia, Pa.  
 The Special Products Co., Hopewell, Va.  
 Wallace, Rodney, Fitchburg, Mass.  
 Webb & Co., Chas. J., Philadelphia, Pa.

#### WASTES, BASIN.

(See also Supplies & Wastes Basin.)

Acheson Mfg. Co., Braddock, Pa. (single and continuous.)  
 Acme—Exeter Brass Works, Exeter, N. H.  
 Aillingham—Goets Brass Co., Chicago, Ill.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Arlington, Majestic, Pop-up—Hoffmann & Billings Mfg. Co., Milwaukee, Wis.  
 Ball-O—J. B. Wise, Inc., Watertown, N. Y.  
 Belmar-Clipper, Belmar Fuller, Carlisle Clipper, Carlisle Fuller—McCambridge Co., Philadelphia, Pa.  
 Bi-Transit—J. A. Cochran Brass Mfg. Co., Cleveland, Ohio.  
 Bridgeport Brass Co., Bridgeport, Conn.  
 Bryant, Success, Wagner, Bi-Transit—The Peck Bros. & Co., New Haven, Conn.  
 C & I—Covne & Delany Co., Brooklyn, N. Y.  
 Columbia, Harlem, Harvard, Princeton, Radcliffe, Webco, Wellesley, Yale—F. W. Webb Mfg. Co., Boston, Mass.  
 Crown, Duovia, Knickerbocker—Federal-Huber Co., Chicago, Ill.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Dunstane Mfg. Co., Concord, N. H.  
 Eclipse, Neptune—Fleck Bros. Co., Philadelphia, Pa.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Elgin—Elgin Brass Co., Cleveland, O.  
 Etna, Ideal—Wolff Mfg. Co., Chicago, Ill.  
 Exeter Brass Works, Exeter, N. H.  
 Femco—Frost Mfg. Co., The, Kenosha, Wis.  
 Fries & Co., Buffalo, N. Y.  
 Hajoca, Electric, Modern, Perfection—Haines, Jones & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 Ideal—Dearborn Brass Co., Cedar Rapids, Ia.  
 I. X. L.—United States Sanitary Mfg. Co., Pittsburgh.  
 Keno—The Frost Mfg. Co., Kenosha, Wis.  
 Loyal Brass Co., Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 Nassau—J. L. Mott Iron Wks., Trenton, N. J.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 Never Lose—American Fin Co., Waterbury, Conn.  
 New Jersey Tube Co., New York, N. Y.  
 Nyack—Bunting-Stevens Co., Boston, Mass.  
 Patent Acme—Exeter Brass Works, Exeter, N. H.  
 Perfection—Thos. H. Hutchinson, New York, N. Y.

Perkes, Co., Charles, Philadelphia, Pa.  
 Primrose—Dimock & Fink Co., New York, N. Y.  
 Purity, Saxon, Sorno—J. D. Johnson Co., Philadelphia, Pa.  
 Reid Brass Mfg. Co., R. W., Brooklyn, N. Y.  
 Rex, Sanos—Jenkins Mfg. Co., New York, N. Y.  
 Royal—The Royal Brass Mfg. Co., Cleveland, O.  
 Secret—The Murdock Mfg. & Supply Co., Cincinnati, S. & K.—Street & Kent Mfg. Co., Chicago, Ill.  
 Soderlund, U. B.—Stebbins Mfg. Co., East Springfield, Mass.  
 Speakman Co., Wilmington, Del.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 ♦ United Brass Mfg. Co., Cleveland, O.  
 Universal, Bi-Transit—American Fin Co., Waterbury, Conn.  
 Wolff's Ideal, Wolff's Pop-up—Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

#### WASTES, BATH.

(See also Supplies & Wastes, Bath.)

Adjusto—American Fin Co., Waterbury, Conn.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 American—The Murdock Mfg. & Supply Co., Cincinnati, O.  
 American Fin Co., Waterbury, Conn.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 Apex—F. N. Dubois & Co., Inc., The, New York, N. Y.  
 Ball-O, Garland—J. B. Wise, Inc., Watertown, N. Y.  
 Belmar-Fuller, Carlisle-Clipper, Carlisle-Fuller, Orion—McCambridge Co., Philadelphia, Pa.  
 Bi-Transit—Reid Brass Mfg. Co., Brooklyn, N. Y.  
 Blessing, C. A., Philadelphia, Pa.  
 Brandon, Columbia, Harvard, Princeton, Radcliffe, Star, Wellesley—F. W. Webb Mfg. Co., Boston, Mass.  
 Brasco—The Columbus Brass Co., Columbus, O.  
 Bridgeport—Bridgeport Brass Co., Bridgeport, Conn.  
 Clow Continuous—James B. Clow & Sons, Chicago, Ill.  
 Crown, Duovia, Gasco, Knickerbocker, Reliance, Watrous Lifto—Federal-Huber Co., Chicago, Ill.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Detroit Sanitary Supply Co., Detroit, Mich.  
 Eclipse, Neptune, Victor—Fleck Bros. Co., Philadelphia, Pa.  
 Edwardsville Brass Co., Edwardsville, Ill.  
 Elgin Brass Co., Cleveland, O.  
 Exeter Brass Works, Exeter, N. H.  
 Femco—Frost Mfg. Co., The, Kenosha, Wis.  
 Fries & Co., Buffalo, N. Y.  
 Frost Mfg. Co., Kenosha, Wis.  
 Glauber Brass Mfg. Co., Cleveland, O.  
 Goets Bi-Transit—Goets Brass Co., Chicago, Ill.  
 Hajoca, Electric—Haines, Jones, & Cadbury Co., Philadelphia.  
 Haydenville Co., The, Haydenville, Mass.  
 Humphries Mfg. Co., The, Mansfield, O.  
 I. & N.—The Ireland & Matthews Mfg. Co., Detroit.  
 Keno—The Frost Mfg. Co., Kenosha, Wis.  
 Loyal Brass Co., Cleveland, O.  
 McDonald Mfg. Co., A. Y., Dubuque, Ia.  
 Merrie, Hugh, Cincinnati, O.  
 Monarch Brass Co., The, Cleveland, O.  
 Morency-Van Buren Mfg. Co., Sturgis, Mich.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Mueller, H., Mfg. Co., Decatur, Ill.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 Nelson Mfg. Co., N. O., St. Louis, Mo.  
 New Jersey Tube Co., New York, N. Y.  
 Park & McKay Co., The, Detroit, Mich.  
 Patent Acme—Exeter Brass Works, Exeter, N. H.  
 Primrose, Purity, Saxon, Sorno—J. D. Johnson Co., Philadelphia, Pa.  
 Rex—Jenkins Mfg. Co., Inc., New York, N. Y.  
 Richardson, Edro., Brass Co., Baltimore, Md.  
 Rival, Triumph—The Peck Bros. & Co., New Haven, Conn.  
 Ross & Gade Co., Inc., New York.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Salem Brass & Iron Mfg. Co., Salem, N. J.  
 Savill & Sons, Thomas, Philadelphia, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Street & Kent Mfg. Co., Chicago, Ill.  
 Tip Top—Tip Top Specialty Co., North Tonawanda, N. Y.  
 Trenton Brass & Machine Co., The, Trenton, N. J.  
 Union—Sterling Sanitary Mfg. Co., Pittsburgh, Pa.  
 ♦ United—United Brass Mfg. Co., Cleveland, O.  
 Universal—Hoffman & Billings Mfg. Co., Milwaukee, Wis.  
 Weiskittel & Son, A., Baltimore, Md.  
 Whitlock Coll Pipe Co., The, Hartford, Conn.  
 Wolff's Ideal, Wolff's Pop-up—Wolff Mfg. Co., Chicago, Ill.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Wonder—American Fin Co., Waterbury, Conn.  
 Woodward-Wanger Co., Philadelphia, Pa.  
 Yorklyn—Speakman Co., Wilmington, Del.

**WASTES, BATH, OVERFLOW AND TRAP CONNECTED.**

(See also "Supplies and Wastes.")

Acme—Acme Mfg. Co., Bangor, Me.  
 American Sanitary Mfg. Co., Abingdon, Ill.  
 American—American Foundry & Mfg. Co., St. Louis, Mo.  
 American Brass Novelty Co., Grand Haven, Mich.  
 American Fin Co., Waterbury, Conn.  
 Ball—J. B. Wise, Inc., Watertown, N. Y.  
 Beaton Mfg. Co., A. J., New Britain, Conn.  
 Clean Sweep—Detroit Sanitary Supply Co., Detroit, Mich.  
 Cochran Brass Mfg. Co., J. A., Cleveland, O.  
 Dearborn Brass Co., Cedar Rapids, Ia.  
 Economy—Crescent Mfg. Co., Scottsdale, Pa.  
 Empire—The Empire Brass Mfg. Co., Cleveland, O.  
 Haydenville Co., The, Haydenville, Mass.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 McDonald, A. Y., Mfg. Co., Dubuque, Ia.  
 Miller Foundry & Specialty Co., North Tonawanda, N. Y.  
 Monarch—The Monarch Brass Co., Cleveland, O.  
 Murdock—The Murdock Mfg. & Supply Co., Cincinnati, O.  
 Murphy—Murphy Specialty Co., Milwaukee, Wis.  
 New Jersey Tube Co., New York, N. Y.  
 Richmond Foundry & Mfg. Co., Richmond, Va.  
 Schwander Brass Mfg. Co., St. Louis, Mo.  
 Wolverine Brass Works, Grand Rapids, Mich.  
 Woodward-Wanger Co., Philadelphia, Pa.

**WASTES, LAUNDRY TRAY.**

American Foundry & Mfg. Co., St. Louis, Mo.  
 Andrews—Thos. G. Andrews & Co., Boston, Mass.  
 Exeter Brass Works, Exeter, N. H.  
 Fleck—Fleck Bros. Co., Philadelphia, Pa.  
 Goets—Goets Brass Works, Chicago, Ill.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Richmond Fdy. & Mfg. Co., Richmond, Va.  
 Woodley Slate Co., Bangor, Pa.

**WASTES, LAVATORY, PEDAL.**

Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 Prudential—Federal-Huber Co., Chicago, Ill. (pedal and knee action).  
 Sanitas—Sanitas Mfg. Co., Boston, Mass.  
 Saxon, Sorno—J. D. Johnson Co., Philadelphia, Pa.  
 Speakman Co., Wilmington, Del.

**WASTE AND OVERFLOW, SINK.**

Simplex—J. L. Mott Iron Works, Trenton, N. J.

**WASTES FOR PLUNGE BATHS.**

Mott Iron Works, The J. L., Trenton, N. J.

**WATCHES, TIME AND MOTION STUDY.**

Decimal—Silberberg, Mortimer J., Chicago, Ill.

**WATER CLOSET COMBINATIONS.**

(See also following specific headings.)

American Sanitary Works Co., New York, N. Y.  
 Bailey & Farrell Mfg. Co., Pittsburgh, Pa.  
 Bala, Dru, Wayne—Walls, Owen & Stambach Co., Philadelphia, Pa.  
 B. O. T. Mfg. Co., Trenton, N. J.  
 Bowlus Mfg. Co., The, Springfield, O.  
 Central Closet Co., Holland, Mich.  
 Chicago Pottery Co., Chicago, Ill.  
 Coronet, Corryn—Crane Co., Chicago, Ill.  
 Crane Co., Chicago, Ill. Trade names—Atlas, Corsyn, Mauretania, Saneto, Purus, Juvenis, Illinini.  
 Douglas, The John, Co., Cincinnati, O.  
 Duojet—The Imperial Brass Mfg. Co., Chicago.  
 Eclipse—Fleck Bros. Co., Philadelphia, Pa.  
 Eljer Co., Cameron, W. Va. Trade names—Cameron, Colfax, Maximus, Morris, Pacific, Pierce, Valkyrie, Yosemite.  
 Empire, New Dominion—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Hajoca Duojet—Haines, Jones & Cadbury Co., Philadelphia.  
 Hogan—Hogan Mfg. Co., The, Hartford, Conn.  
 Inserto, Lipto—Flushvalve Co., New York, N. Y.  
 Jack Frost—A. Weiskittel & Son Co., Baltimore, Md.  
 J. M. 1913—Johns-Manville, Inc., New York, N. Y.  
 Johnson, J. D., Co., Philadelphia, Pa. Trade names—Delaware, Drexel, Holly, Mercuroid, Nujet, Nurex, Nerwal, Princeton, Purity, Rex, Rufelos, Ronjo, Sphinx, Saxon, Tiber, Vigilant, Walcos, Columbia, Crown, Holly, Norwood, Primrose, Rancocas, Royal Flush, Sandow.  
 Juno, "Noiseless," Vesta—Daly Plumbing Supply Co., Boston, Mass.  
 Kelly—Thos. Kelly & Bros., Chicago, Ill.  
 Maddock's, Thos., Sons Co., Trenton, N. J.  
 McCambridge Co., Philadelphia, Pa. Trade names—Ardeka, Belmont, Belmar, Carlisle, Cheslisle, Carl-

# WATROU PATENT PLUMBING FIXTURES "DUOJET" Water Closets

Write for Catalog of Plumbing Specialties  
 THE IMPERIAL BRASS MFG. CO., 513 So. Racine Ave., Chicago

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McDonald Mfg. Co., A. Y., Duquesne, Ia.  
 Peerless Selling Co., Evansville, Ind.  
 Sales Own—Murray W., Sales Co., Detroit, Mich.  
 Self Ventilating—Philip Haas Co., Dayton, O.  
 Special 1½—Chas. Millar & Son Co., Utica, N. Y.  
 Standard Sanitary Mfg. Co., Pittsburg, Pa. (Trade names—Arno, Delecto, Paragon, Ferguson Atlanta, Philadelphia, Bridewall, Cyclone, Louisville, Montclair, McIver, Adonis, Anoco, Aledo, Arnum, Azram Arno, Brighton, Devoro, Delecto, Expulso, Ejecto, Gintum, Gijet, Leader, Mikado, Manila, Onita, Pedesto, Plaudit, Purimo, Paragon, Spartan, Temple, Vedora, Tosemite, Rapido, Instanto, Alta, Gianto).

Toronto—The J. L. Mott Iron Works, Trenton, N. J.  
 Union Sanitary Works, Noblesville, Ind. (high and low).

Universal Sanitary Mfg. Co., New Castle, Pa.  
 Van Ar Co—Van Arnam Mfg. Co., Fort Wayne, Ind.  
 Vogel Patent—Vogel, Joseph A. Co., Wilmington, Del.

Zwermann—Zwermann Company, Robinson, Ill.

**WATER CLOSETS, AUTOMATIC FLUSHING.**

(See also "Water Closet Combinations, Seat Action.")

Auto Silent—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Bowlus Jewel—The Bowlus Mfg. Co., Springfield, O.  
 Child's—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Clow-Madden's Patent, Auto-Jet, Cymric, Cymric Jr., Novus Jr.—James B. Clow & Sons, Chicago, Ill.

Duojet—The Imperial Brass Mfg. Co., Chicago.  
 Foreman, Superior, Selmore—Wolff Mfg. Co., Chicago, Ill.

Genesee—Nunn Brass Works, Rochester, N. Y.  
 Haas, Philip, Co., Dayton, Ohio.  
 Hajoca, Academy—Haines, Jones & Cadbury Co., Philadelphia.

Hogan—The Hogan Mfg. Co., Hartford, Conn.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.

Jack Frost—A. Weiskittel & Son Co., Baltimore, Md.  
 Kenney—The Kenney Mfg. Co., New York, N. Y.  
 Nevo—Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Rex, Saxon, Sorno—J. D. Johnson Co., Philadelphia, Pa.

Standard Sanitary Mfg. Co., Pittsburgh, Pa. Trade names—Arno, Arnum, Bastile, Chidlow, Delecto, Gintum, Osborn, Paragon, Reverse, Uthful.

Standard Tank & Sea Co., Camden, N. J.  
 Toledo Mfg. & Supply Co., The, Toledo, O. Trade names—Acaco, Overland, Tobisco.

Ventilano—Thos. Kelly & Bro., Chicago, Ill.

Vogel Patent—Vogel, Joseph A. Co., Wilmington, Del.

Wolff Mfg. Co., Chicago, Ill. Trade names—Firmon, Selmore, Superior.

**WATER CLOSETS, FACTORY.**

Auto-Silent—Gaylord Sanitary Mfg. Co., El Dorado, Kans.

Bowlus—The Bowlus Mfg. Co., Springfield, O.  
 Delta, Geneva, Itasca—Rundle-Spence Mfg. Co., Milwaukee, Wis.

Haas, Philip, Co., Dayton, O.  
 Kelly—Thos. Kelly & Bros., Chicago, Ill.

Maltby, Geo. W., & Sons Co., Buffalo, N. Y.  
 Maxco—Sherwood Brass Works, Detroit, Mich.

Packard Special—Walker Mfg. & Supply Co., Detroit, Mich.

Royal—The Hogan Mfg. Co., Hartford, Conn.  
 Sandow, Sorno—J. D. Johnson Co., Philadelphia, Pa.

Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Vogel Patent—Vogel, Joseph A. Co., Wilmington, Del.

Weiskittel, A., & Son Co., Baltimore, Md.

**WATER CLOSETS, FLUSHING VALVE.**

Adonis, Adrian, Adriatic, Ajax, Alamo, Arkin, Auto, Altruist, Gasco—Federal-Huber Co., Chicago, Ill.

**Alba**—Eljer Co., Cameron, W. Va.  
**Autometer**—James B. Clow & Sons, Chicago, Ill.  
**Bowlus**—The Bowlus Mfg. Co., Springfield, O.  
 Burlington, Camden, Cumberland, Essex, Glendola, Lanoka, Middlesex, Passaic, Sanos—Jenkins Mfg. Co., New York, N. Y.  
**Colonial**—The Dececo Co., Boston, Mass.  
**Flush Valve**—The Sanitary Mfg. Co., Hamilton, O.  
**Gallia**—N. O. Nelson Mfg. Co., St. Louis, Mo.  
**Haas**—Philip Haas Co., Dayton, O.  
 Hajoca, Regulo—Haines, Jones & Cadbury Co., Philadelphia.  
**Hogan**—The Hogan Mfg. Co., Hartford, Conn.  
 Instanto, Metic, Payne Pattern, Rapido—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
**Johnson, J. D., Co., Inc.**, Philadelphia, Pa. Trade names—Artisan, Gramatan, Lisbon, Ludlow, Niagara, Ovalip, Perfecto, Regent, Rex, Sandow, Vigilant, Wallico.  
**Logan**—Walker Mfg. & Supply Co., Detroit, Mich.  
**Mott, J. L.**, Iron Works, Trenton, N. J. Trade names—Attila, Akron, Beekman, Compacto, Cyclo, Langham, Titan, West Point.  
 Neptune, Jr., Panama, Pullman, Puritan, Tyrolene, Wayne, Yalu—Fleck Bros. Co., Philadelphia, Pa.  
**Peerless Selling Co.**, Evansville, Ind.  
**Primal-Nason Mfg. Co.**, New York, N. Y.  
**Royal Sloan**—Sloan Valve Co., Chicago, Ill.  
**Sanitas Mfg. Co.**, Boston, Mass. Trade names—Sanitas, Dover, Easton, Hub, Kineo, Rex, Terminal, Trojan, Washdown, Crown, Imperial, Netlids, Rex-Crescent, Keystone.  
**Sheridan**—Walker Mfg. & Supply Co., Detroit, Mich.  
 Sloan Royal—Sloan Valve Co., Chicago, Ill.  
 Two Fired—Trenton Potteries Co., Trenton, N. J.  
**Vogel Patent**—Vogel, Joseph A., Co., Wilmington, Del.  
**Watrous Duojet**—The Imperial Brass Mfg. Co., Chicago.  
**Weiskittel, A., & Son Co.**, Baltimore, Md.

#### WATER CLOSETS, FROST PROOF.

**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**Anti-Freezing**—J. L. Mott Iron Works, Trenton, N. J.  
**Arctic**—Fleck Bros. Co., Philadelphia, Pa.  
**Climax**—The C. M. Kemp Mfg. Co., Baltimore, Md.  
**Clow-Madden's Patent**—James B. Clow & Sons, Chicago, Ill.  
**Conran**—Conran Anti Freezing Closet Co., New York, N. Y.  
**Frost King**—Crampton-Farley Brass Co., Kansas City, Mo.  
**Gaylord Sanitary Mfg. Co.**, El Dorado, Kans.  
**Genesee**—Nunn Brass Works, Rochester, N. Y.  
**Haas**—Philip Haas Co., Dayton, O.  
 Hajoca, Frosto, Pitno—Haines, Jones & Cadbury Co., Philadelphia, Pa.  
**IXL Pump & Mfg. Co.**, The, Philadelphia, Pa.  
**Jack Frost**—A. Weiskittel & Son Co., Baltimore, Md.  
**Johnson, J. D., Co., Inc.**, Philadelphia, Pa. Trade names—Rexometer, Saxon, Sorno, No. 1, No. 2.  
**Jones Hollow Ware Co.**, Baltimore, Md.  
**Kelly**—Thos. Kelly & Bro., Chicago, Ill.  
**Siberia**—Richards Mfg. Co., The, Grand Rapids, Mich.  
**Standard Sanitary Mfg. Co.**, Pittsburgh, Pa.  
**Vogel Patent**—Vogel, Joseph A., Co., Wilmington, Del.  
**Wolf Mfg. Co.**, Chicago, Ill.  
**Walls, Owen & Stambach Co.**, Philadelphia.

#### WATER CLOSETS, HIGH TANK.

**Adee, Fred Co.**, New York, N. Y. Trade names—Cedric, Vesta.  
**B. O. T.**—American Sanitary Works, Trenton, N. J.  
**Bowlus Jewel**—Bowlus Mfg. Co., Springfield, O.  
**Clow, James B., & Sons Co.**, Chicago, Ill. Trade names—Auto Projecto, Jr., Buena, Celtic, Dolphin, Enfantia, Juvenis, Nouveau, Jr., Oceanic, Projecto, Teutonic.  
**Craig, David**, Boston, Mass. Trade names—Craig, Craig's.  
**Dalton-Ingersoll Mfg. Co.**, Boston, Mass. Trade names—Burman, Charles, Dando, Imperial, Java, Jecto, Malabar, Melbourne, Siphall, Suffolk.  
**Dececo Co.**, The, Boston, Mass. Trade names—Colonial Corinthian, Doric, Pure, Roman, Shaw-shen.  
**Douglas, John, Co.**, The, Cincinnati, O. Trade names—Cornell, Jr., Cuba, Princeton, Jr.  
**Dubois, F. N., & Co.**, New York, N. Y. Trade names—Amityville, Champion, Defender, DeVoe, Diamond, F. N. D., Reno.  
**Erie**—W. A. Case & Son Mfg. Co., Buffalo, N. Y.  
**Federal-Huber Co.**, Chicago, Ill. Trade names—Gymnasia, Jetector, Juvenile, Nova.  
**Fleck Bros. Co.**, Philadelphia, Pa. Trade names—Aquaduct, Clawfoot, Doraf, Giant, Olympia, Pedestal No. 2, Pioneer, Sprite.  
**Gaylord Sanitary Mfg. Co.**, El Dorado, Kans. Trade names—Auto Silent, Gaylord.  
**Great Western Pottery Co.**, Kokomo, Ind. Trade names—Huron, Superior.

**Haines, Jones & Cadbury Co.**, Philadelphia, Pa. (Trade names—Hajoca, Populas, Prometheus.)  
**Hogan Mfg. Co.**, The, Hartford, Conn. Trade names—Charter Oak, Flushing Meter.  
**Hussey, Wm. H., & Son**, New York, N. Y. Trade names—Climax, Eclipse, Improved Rifle, Premier, Royal Flush, Straight Flush.  
**Jenkins Mfg. Co.**, New York, N. Y.  
**Johnson, J. D., Co., Inc.**, Philadelphia, Pa. Trade names—Coronada, Crown, Niagara, Norwood, Perfecto, Rex, Rex Junior, Sandow, Saranac, Vigilant.  
**Kohler**—Kohler Co., Kohler, Wis.  
**Leader**—The Enameled Tank Co., Kalamazoo, Mich.  
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**Maltby, Geo. W., & Sons Co.**, Buffalo, N. Y.  
**McClure, R. C., Co.**, Syracuse, N. Y. Trade names—Salina, Verona, Walton.  
**McDonald, A. Y., Mfg. Co.**, Dubuque, Iowa. Trade names—Eureka, Jetties, Pearl, Perfection.  
**Meyer-Sniffen Co.**, The, New York, N. Y. Trade names—Bidet, Brighton, Em-Ess, Gibraltar, Hellyer, Oxford, Juvenile, Pemberton, Servian, Surety, Vortex, York.  
**Millar, Chas. & Son Co.**, Utica, N. Y. Trade names—Ca-yu-ga, Essex, Harum.  
**Mott, J. L.**, Iron Works, Trenton, N. J. Trade names—Beekman, Cyclo, Hercules, Torrento, West Point.  
**Naturo**—Locke, Stevens Co., Boston, Mass.  
**Nelson, N. O., Mfg. Co.**, St. Louis, Mo. Trade names—Alaska, Asylum Gigantic, Atlas, Austin, Denver, Dixie, Empire, Giant, Gigantic, Joliet, Kensington, Klondike, Lacleda, Lindell, Majestic, Mammoth, Moline, Mogul, Nelson, New Dominion, Premo, St. Louis, Santiago, Sylvania, Syphonia, Victor, Volita, Westminster.  
**Paragon Brass Mfg. Co.**, Cleveland, O. Trade names—Erie, Natura, Regal, Tiffin.  
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**Sanitas Mfg. Co.**, Boston, Mass. Trade names—Sanitas-Bay State, Sanitas-Crown Ventilating, Sanitas-Easton, Sanitas-Nititus, Sanitas-Portsmouth, Sanitas-Regal, Sanitas-Rex, Sanitas-Royal, Sanitas-Trojan.  
**Two Fired**—Trenton Potteries Co., Trenton, N. J.  
**Wakefield**—Dimock & Fink Co., New York, N. Y.  
**Walco**—C. D. Wallace & Co., Pittsburgh, Pa.  
**Walker Mfg. & Supply Co.**, Detroit, Mich. Trade names—Avon, Brighton, Elga, Newport, Vistula.  
**Walls, Owen & Stambach Co.**, Philadelphia, Pa. Trade names—Carlton, Hermosa, Juniata, Maclstrom, Monreve, Otsego, Penn. Supreme, Torrent, Waldorff, Walton, Water Gap.  
**Webb, F. W., Mfg. Co.**, Boston, Mass. Trade names—Alaskan, Atlas, B. M., Brandon, Femona, Glendon, Lucania, Melrose, Mystic, Phoenix, Pluton, Racine, Regis, Star, Star Regis, Star Siphon, Verona, Webb Washroom.  
**Wolf Mfg. Co.**, Chicago, Ill. Trade names—Anchor, Atlantia, Aurga, Capax, Firmon Garda, Glide, Laguna, Lupus, Parvus, Solidon, Superior, Trapero, Yazoo, York.  
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**Zenith Jr. Improved**—McCambridge Co., Philadelphia, Pa.

#### WATER CLOSETS, KOFFER.

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**Madoric**—Thos. Maddock's Sons Co., Trenton, N. J.  
**Maltby, Geo. W., & Sons Co.**, Buffalo, N. Y.  
**Melver**—L. Wolf Mfg. Co., Chicago, Ill.  
**Oval**—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
**Philadelphia**—Standard Sanitary Mfg. Co., Pittsburgh.  
**Round**—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
**Rundle Mfg. Co.**, Milwaukee, Wis.  
**Santo**—The Hydraulic Specialty Co., Philadelphia, Pa.  
**Simplo**—J. L. Mott Iron Works, Trenton, N. J.  
**Vogel Patent**—Vogel, Joseph A., Co., Wilmington, Del.

#### WATER CLOSETS, LOW TANK.

**Acme**—Wm. S. Emery, New York, N. Y.  
**Adee, Fred Co.**, New York, N. Y. Trade names—Cliff, Royal Flush, Vesta.  
**American**—American Valve & Tank Co., Indianapolis, Ind.

WHEN Old King Winter accompanied by Mr. Shivers, General Storm and Mr. Blizzard come roaring through the land, they will play havoc with most unprotected plumbing, but they will attack in vain the New Improved

# "JACK FROST" Closet

It is the anti-freezing closet in the fullest sense of the word. Works automatically.

Valve controlling flush to hopper is independent, and operates at a right angle with the supply valve. Same is closed by ball bearing knob coming in contact with cam on seat. When the main spring raises the seat, the flush valve is opened by the force of water, assisted by a small exposed spring.

GENERAL

STORM



Phosphor Bronze Exposed Adjustable Main Spring

is mounted in open cage on top of valve. Tension of spring can be adjusted to suit water pressure by regulating spud and lock nut. All parts are so arranged as to drain free from water, which prevents freezing.

We have maintained our former advantage of adjustable roughing-in dimensions. The tee connecting flush tank can be turned to the side, thereby enabling the plumber to adjust the roughing-in dimensions to any point between 12 in. and 16 in. which is a great convenience, and time and space saver.

The trade has been quick to recognize the superiority of our new No. 10 Jack Frost Closet. It is practically fool-proof, does not hammer or get out of order, and is very simple and durable.

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**A. Weiskittel & Son Co.**  
Baltimore, Md., U. S. A.

MR

SHIVERS



B. O. T.—American Sanitary Works, New York, N. Y.  
 Bowlus Jewel—Bowlus Mfg. Co., Springfield, O.  
 Burton—Resolute Pottery Co., Trenton, N. J.  
 Carlsbad—Fleck Bros. Co., Philadelphia, Pa.  
 Chicago Pottery Co., Chicago, Ill.  
 Cooper Sanitary Mfg. Co., Philadelphia, Pa. Trade names—Belgian, Lone Star, Nautilus, Syllent, Waveline.  
 Corinthian—The Ideal Mfg. Co., Detroit, Mich.  
 Craig—David Craig, Boston, Mass.  
 Dalton—Ingersoll Mfg. Co., Boston, Mass. Trade names—Burmah, Ceylon, Charles, Dando, Imperial, Java, Siphall.  
 Dececo Co., The, Boston, Mass. Trade names—Premier, Roman.  
 Dimock & Fink Co., New York, N. Y.  
 Du Bois, F. N., & Co., Inc., The, New York, N. Y. Trade names—Acme, Apex, Amityville, Champion, Defender, Sundhurst.  
 Eljer Company, Cameron, W. Va. Trade names—Coronado, Eljer, Valkyrie, West Point, Yosemite.  
 Excelsis, Jr.—The John Douglas Co., Cincinnati, O.  
 Federal-Huber Co., Chicago, Ill. Trade names—Elgin, Polo, Regal, Regalo, Tremona.  
 Gaylord—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Great Western Pottery Co., The, Kokomo, Ind. Trade names—Dublin, Venice, Vienna.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa. Trade names—Amoy, Eastern, Hajoca, Northern, Paoli, Pekin, Perfect, Regulo, Rosemont, Shantung, Southern.  
 Hogan Mfg. Co., The, Hartford, Conn. Trade names—Harmony, Hogan Washdown, Royal.  
 Inaudio—Camden Pottery Co., Camden, N. J.  
 Johnson, J. D., Co., Inc., Philadelphia, Pa.—Trade Names—Cliff, Clossuff, Colona, Columbia, Crown, Delaware, Drexel, Holly, Holly Special, Mercurold, Nujet Nerwal, Nurex, Ovalip, Perfecto, Princeton, Primrose, Purity, Rex, Ronjo, Rufelos, Royal Flush, Saxon, Sandow, Sphinx, Triton, Tiber, Vigilant, Walcloa.  
 Kohler—Kohler Co., Kohler, Wis.  
 Kretschmer Mfg. Co., Dubuque, Ia.  
 Lirio, Zimapan—The Humphries Mfg. Co., Mansfield, O.  
 Lodo—Paragon Brass Mfg. Co., Cleveland, O.  
 Maddock's Thos., Sons Co., Trenton, N. J. Trade names—Ariston, Madera, Madison, Madena, Madoric, Maderno.  
 Maxco—Climax Sanitary Co., Detroit, Mich. (seat action).  
 McCambridge Co., Philadelphia, Pa. Trade names—Ardeka, Belmar, Carlisle, Carlton, Exeter, Kalyx, Lyric, Majestic, Mascotte, Media, Nautilus, Reno, Zenith Improved.  
 McDonald, A. Y., Mfg. Co., Dubuque, Iowa. Trade names—Regal, Rival, Victor.  
 Mendota—Rundle-Spence Mfg. Co., Milwaukee, Wis.  
 Millar, Chas., & Son Co., Utica, N. Y. Trade names—Del-a-ware, Mo-Hawk, Onelda, On-el-da Jr., Ce-ce-o-la, Richfield, Sar-a-nac, Special ½, Trenton, U. T. K., Wa-i-en-tha.  
 Mott, J. L., Iron Works, Trenton, N. J. Trade names—Beekman, Lombard, Lawrence, Silentum, Toronto, Silentis.  
 Nason Mfg. Co., New York, N. Y. Trade names—Seneca, Utica.  
 Nelson Mfg. Co., N. O., St. Louis, Mo. Trade names—Alamo, Anaconda, Beasmer, Buckingham, Childs, Denison, Denver, Dresden, Elite, El Paso, Euclid, Gigantic, Houston, Jefferson, Jersey, Julian, Lincoln, Madison, Mammoth, Maxon, Meteor, New Dominion, Newport, Oswego, Portland, San Antonio, San Jose, Santiago, Spencer, Vulcan, World's Fair.  
 Nujet—J. D. Johnson Co., New York, N. Y.  
 Old Ironsides—The Enameled Tank Co., Kalamazoo, Mich.  
 Park & McKay Co., Detroit, Mich. Trade names—Eloise, Leader, Noiseless, Perfecto, Superior.  
 Peck Bros. & Co., The, New Haven, Conn. Trade names—Acto, Atlas, Auburn, Augusta, Economy, Juvento, Manhattan, Primary, Red Lion, Richmond, Syco.  
 Pierce, Butler & Pierce Mfg. Co., Syracuse, N. Y. Trade names—Automatic, Comfort, Monarch, Onondaga, Perfect, Silent, Union, Victor.  
 Purity Naturo—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Regla—James B. Clow & Sons, Chicago, Ill.  
 Robertson, James, Mfg. Co., The, Baltimore, Md. Trade names—Acme, Datona, Eclipse, Hanover, Hopkins, Kenwood, Reverso, Rosco, Silentia, Tuxedo.  
 Rundle Mfg. Co., Milwaukee, Wis.  
 Sanitas-Crown—Sanitas Mfg. Co., Boston, Mass.  
 Silent Knight—Peerless Selling Co., Evansville, Ind.  
 Sloan, Samuel, & Co., Rochester, N. Y. Trade names—Cresco, Manitou, Ontario, Plymouth, Quieto, Resesco, Triesco.

Standard Sanitary Mfg. Co., Pittsburgh, Pa. Trade names—Ejecto, Expulso, Devoro Furimo, Pedesto.  
 Stanwix—Standard Tank & Seat Co., Camden, N. J.  
 Tiffin—The Sanitary Co., Cleveland, O.  
 Trenton Potteries Co., Trenton, N. J. Trade names—Siwelco, Two Fired.  
 Van ArCo—Van Arnham Mfg. Co., Fort Wayne, Ind.  
 Vortex Special—Meyer-Sniffen Co., New York, N. Y.  
 Walker Mfg. & Supply Co., Detroit, Mich. Trade names—Avon, Blenheim, Cy-Jet, Elba, Indus, Lorraine, Luxora, Rudolph, Syhas, Venetia, Vistula.  
 Webb, F. W., Mfg. Co., Boston, Mass. Trade names—Bristol, Cadillac, Celo, Femona, Hamilton, Lonsdale, Melrose, Newbury, Oneida, Regis, Star Regis, Vernon, Webb Washdown, Yukon.  
 Wolff Mfg. Co., Chicago, Ill. Trade names—Atlanta, Firmon, Garda, Jeddo, Lupus, Parvus, Solido, Superior, Trava, Trapero, Vigora, Yazoo, York.

#### WATER CLOSETS, PLUNGER.

Detroit, Sanitary—Park & McKay Co., Detroit, Mich.

#### WATER CLOSETS, PORCELAIN ENAMELED.

Boga—Keystone Supply & Mfg. Co., Philadelphia.  
 Cahill—Cahill Iron Works, Chattanooga, Tenn.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa. Trade names—Elmo, Eltor, Eltor Jr., Hajoca.  
 Iron City Sanitary Mfg. Co., Pittsburgh, Pa.  
 McVay & Walker, Bradock, Pa.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa., Trade names—Arno, Atlanta, Delecto, Ferguson, Paragon, Standard.

#### WATER CLOSETS, PRESSURE TANK.

Auto Silent—C. T. Ham Mfg. Co., Rochester, N. Y.  
 Bowlus Jewel—Bowlus Mfg. Co., Springfield, O.  
 Cliff, Perfecto, Royal Flush—J. D. Johnson Co., Philadelphia, Pa.  
 Cyclo—The J. L. Mott Iron Works, Trenton, N. J.  
 Federal-Huber Co., Chicago. Trade names—Gymnasia, Jector.  
 Haas—Philip Haas Co., Dayton, O.  
 Hajoca—Haines, Jones & Cadbury Co., Philadelphia.  
 I. X. L.—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
 Juvenis—Crane Co., Chicago, Ill.  
 Nelson—N. O. Nelson Mfg. Co., St. Louis, Mo.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa. Trade names—Arnum, Gigantum, Giget, Zurich.  
 Standard—Prier Brass Mfg. Co., Kansas City, Mo.  
 Two Fired—Trenton Potteries Co., Trenton, N. J.  
 Vogel Patent—Vogel, Joseph A., Co., Wilmington, Del.  
 Watrous Duojet—The Imperial Brass Mfg. Co., Chicago.  
 Watrous Duojet—The Watrous Co., Chicago, Ill.

#### WATER CLOSETS, PRISON.

Atlanta, Auburn—Federal-Huber Co., Chicago, Ill.  
 Clow's—James B. Clow & Sons, Chicago, Ill.  
 Great Western Pottery Co., The, Kokomo, Ind.  
 Haas—Philip Haas Co., Dayton, O.  
 Haines, Jones & Cadbury Co., Philadelphia, Pa. Trade names—Bastille, Newgate, Penitentiary, Seville.  
 Hamilton Gem—The Sanitary Mfg. Co., Hamilton, O.  
 Jones Hollow Ware Co., Baltimore, Md.  
 Madova—Thos. Maddock's Sons Co., Trenton, N. J.  
 Mott Iron Works, The J. L., Trenton, N. J.  
 Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
 Unique—James B. Clow & Sons, Chicago, Ill.

#### WATER CLOSETS, RAILWAY CAR.

Clow & Sons, James B., Chicago, Ill.  
 Dayton—Dayton Mfg. Co., The, Dayton, O.  
 Duner—Duner Co., Chicago, Ill.  
 Hart—James L. Howard & Co., Hartford, Conn.  
 Jenkins Mfg. Co., New York, N. Y.  
 Maddock's Thos., Sons Co., Trenton, N. J.  
 ♦ Watrous Americo, Duojet and Oriental—Imperial Brass Mfg. Co., Chicago, Ill.

#### WATER CLOSETS, SCHOOL.

Vogel Patent—Vogel, Joseph A., Co., Wilmington, Del.

#### WATER CLOSETS, SEAT ACTION.

(See also "Water Closet Combinations, Automatic Flushing.")

Auto-Silent—Gaylord Sanitary Mfg. Co., El Dorado, Kans.  
 Bloom—Bloom Flusher Co., Tiffin, O.  
 Bowlus Jewel, Bowlus Famous, Bowlus Royal—Bowlus Mfg. Co., Springfield, O.



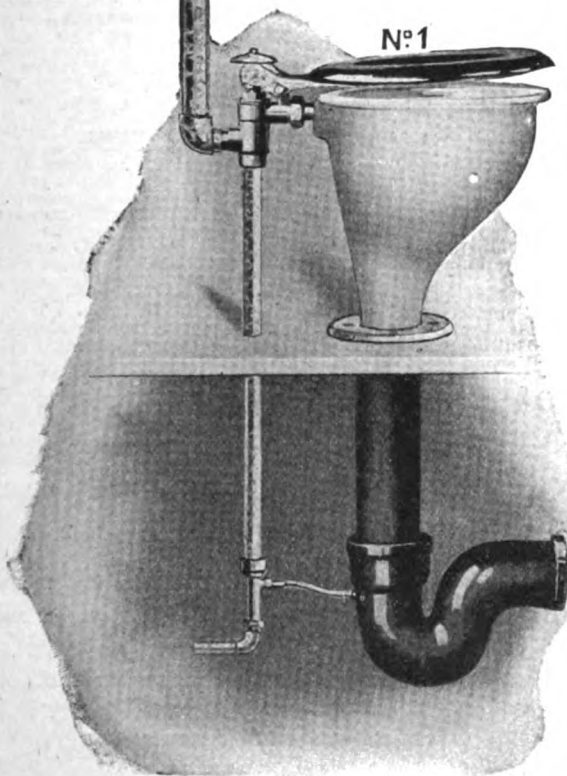


# VOGEL

PATENTED

## Frost-Proof Closets

¶ Over 350,000 giving satisfaction.  
 ¶ Save Water—Require No Pit—Simple in the extreme. ¶ The most durable water closet made. In service winter and summer.



Enameled roll flushing rim bowls.

Heavy brass valves.  
 Strong hard wood seat.  
 Heavy riveted tank.

Malleable seat castings will not break.

Absolutely frost proof when properly installed.

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**Ebco**—The D. A. Ebinger Sanitary Mfg. Co., Columbus, Ohio.  
**Eloise**—Park & McKay Co., Detroit, Mich.  
**Federal-Huber Co.**, Chicago, Ill. Trade names—Aurora, Alpha, Oregon, Sodial.  
**Haas**—Philip Haas Co., Dayton, O.  
**Hajoca**—Haines, Jones & Cadbury Co., Philadelphia.  
**Hogan**—The Hogan Mfg. Co., Hartford, Conn.  
**I. X. L.**—The I. X. L. Pump & Mfg. Co., Philadelphia, Pa.  
**Johnson, J. D., Co., Inc.**, Philadelphia, Pa.—Trade names—Ronjo, Royal Flush, Saxon, Sorns, Sandow, Cliff, Lisbon, Perfecto, Tiber.  
**Kohler Co.**, Kohler, Wis.  
**Maddock's, Thos., Sons Co.**, Trenton, N. J. Trade names—Ariston, Madera, Madoric.  
**Maxco**—Sherwood Brass Works, Detroit, Mich.  
**Met-All-Zinc-All**—Columbus Brass Co., Columbus, O.  
**Peerless**—The Peerless Selling Co., Evansville, Ind.  
**Royal-Sloan Valve Co.**, Chicago, Ill.  
**Sanitas**—Sanitas Mfg. Co., Boston, Mass.  
**Sterling**—Walker Mfg. & Supply Co., Detroit, Mich.  
**Two Fired**—Trenton Pottery Co., Trenton, N. J.  
**Vogel Patent**—Vogel, Joseph A., Co., Wilmington, Del.  
**Watrous Duojet**—The Imperial Brass Mfg. Co., Chicago.  
**Watrous Duojet**—The Watrous Co., Chicago, Ill.

#### WATER CLOSETS, SHIP AND YACHT.

**Andros, Arbutus, Celt, Clinton, Crusoe, Commercial, Tarpon, Colorado, Panama, Dorado, Nation, Clyde, Atlanta, Duro, Elmore, Empire, Erie, Glen, Hudson, Knockabout, Madera, Mohawk, Navahoe, Otter, Peconic, Tuxedo, Utah, Yukon**—A. B. Sands & Son Co., New York, N. Y.  
**Camden Pottery Co.**, Camden, N. J.  
**Curtiss**—J. H. Curtiss Co., The, New York.  
**Duner**—Duner Co., Chicago, Ill.  
**Ebco**—D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
**Jenkins Mfg. Co.**, New York, N. Y. Trade names—Delmar Ironia, Sanos.  
**Maddock & Sons, John, Trenton, N. J.**  
**Maddock's, Thos., Sons Co., Trenton, N. J.**  
**Mallard**—The Thomas Laughlin Co., Portland, Me.  
**McCambridge Co.**, Philadelphia, Pa. Trade names—Atlantic [merchant marine], Columbia, Corsair, Delaware, Mermaid, Neptune Jr., Oceanic.  
**Park & McKay Co., The, Detroit, Mich.**  
**Saxon**—J. D. Johnson Co., Philadelphia, Pa.

#### WATER CLOSETS, VENT COLLARS.

**Maddock's, Thos., Sons Co., Trenton, N. J.**

#### WATER CLOSETS, VENTILATED.

**Bowlus Famous, Bowlus Jewel**—The Bowlus Mfg. Co., Springfield, O.  
**Ebco**—D. A. Ebinger Sanitary Mfg. Co., Columbus, O.  
**Haas**—Philip Haas Co., Dayton, O.

#### WATER CLOSETS, VITREOUS CHINA.

(See also "Earthenware, Sanitary.")

**B. O. T.**—B. O. T. Mfg. Co., Trenton, N. J.  
**Capoco**—Camden Pottery Co., Camden, N. J.  
**Chicago Pottery Co.**, Chicago, Ill.  
**Coronado**—Eller Co., Cameron, W. Va.  
**Hajoca**—Haines, Jones & Cadbury Co., Philadelphia.  
**Impervio**—The Trenton Pottery Co., Trenton, N. J.  
**Keystone**—Keystone Pottery Co., Trenton, N. J.  
**Maddock's Sons Co., Thomas, Trenton, N. J.** Trade names—Ariston, Madera, Madrian, Madison, Madoric, Maderno, Madura, Madris, Madowan.  
**Peerless Selling Co.**, Evansville, Ind.  
**Royal, Hogan, Charter Oak, Harmony**—The Hogan Mfg. Co., Hartford, Conn.  
**Standard Sanitary Pottery Co.**, Elizabeth, N. J.  
**Trapero**—Wolff Mfg. Co., Chicago, Ill.

#### WATER CLOSETS, WALL, SUSPENDED.

**Airco**—Air Reduction Sales Co., New York.  
**Bowlus Famous**—The Bowlus Mfg. Co., Springfield, O.  
**Haas, Philip Co.**, Dayton, O.  
**Hajoca Duojet, Wabbitt**—Haines, Jones & Cadbury Co., Philadelphia.  
**Maddock's, Thos., Sons Co., Trenton, N. J.** Trade names—Madriston, Madwall, Ariston.  
**Murova**—Wolff Mfg. Co., Chicago, Ill.  
**Payne**—Standard Sanitary Mfg. Co., Pittsburgh, Pa.  
**Suspendo**—J. L. Mott Iron Works, Trenton, N. J.

#### WATERPROOFERS, CONCRETE, PASTE AND POWDER.

**Master Builders Co.**, Cleveland, O.

#### WATER SAVERS.

**Broad Gauge Iron Works, Inc.**, Boston, Mass.  
**Little Giant**—Gaylord Sanitary Mfg. Co., El Dorado, Kans.

#### WATER THIEF, WATER SAVERS.

**Clingliffe**—Ohio Pump & Brass Co., Columbus, O.  
**Sherman Mfg. Co., E. B.**, Battle Creek, Mich.  
**Watrous Duojet**—The Watrous Co., Chicago, Ill.

#### WATER TREATMENT FOR BOILERS.

**Seafie, Wm. B., & Sons Co.**, Pittsburgh, Pa.

#### WATERWORKS, DOMESTIC.

(See "Systems, Water Supply, Pneumatic.")

#### WATTMETERS, RECORDING.

**Bristol's**—The Bristol Co., Waterbury, Conn.  
**Roller-Smith Co.**, New York, N. Y.  
**Westinghouse Electric & Mfg. Co.**, Pittsburgh, Pa.

#### WAX, BELT FILLER.

**Cantol**—Cantol Wax Company, Bloomington, Ind.

#### WAX WIRE, FOR CORE VENTS.

**C. W. W.**—Columbia Wax Works, New York, N. Y.

#### WAYS, BALANCING.

(See "Machines, Balancing.")

#### WEBBING, COTTON.

**Buffalo Weaving & Belting Co.**, Buffalo, N. Y.  
**Coe & Brown Co.**—New Haven, Conn.  
**Gilmer, L. H., Co.**, Philadelphia, Pa.  
**Globe Woven Belting Co., Inc.**, Buffalo, N. Y.  
**Green Line**—The Empire Mfg. Co., Lockport, N. Y.  
**Rubber-ite**—McIlroy Belting & Hose Co., Hammond, Ind.  
**Russell Mfg. Co.**, Middletown, Conn.  
**Sutherland Leather & Felt Co.**, Detroit, Mich.  
**Springfield Webbing Co.**, Springfield, Mass.

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♦ **American District Steam Co.**, North Tonawanda, N. Y.

#### WEDGES (FOR AXE, HAMMER AND HATCHET HANDLES).

**Pratt, Wm. E. Mfg. Co.**, Chicago, Ill.  
**Sawyer Belt Hook Co.**, Pawtucket, R. I.  
**Syracuse**—Syracuse Twist Drill Co., Syracuse, N. Y.

#### WEDGES, DROP HAMMER BOARD.

**Smith, H. D. Co.**, Plantsville, Conn.

#### WEDGES, FOUNDRY.

**Sterling Wheelbarrow Co.**, West Allis, Wis.

#### WEDGES AND SLEDGES, STEEL.

**Horseshoe**—Stanley Rule & Level Plant, Atha Dept., New Britain, Conn.  
**Hubbard & Co.**, Pittsburgh, Pa.  
**Iron City Star**—Iron City Tool Works, Pittsburgh, Pa.  
**Klein-Logan Co.**, The, Pittsburgh, Pa.  
**Leontia Tool Co.**, Leontia, O. (coal).  
 ♦ **Oliver Iron & Steel Co.**, Pittsburgh, Pa.  
**Salem Tool Co.**, The, Salem, O.  
**Schmitt, Wm. Co.**, Newark, N. J.  
**St. Louis Malleable Casting Co.**, St. Louis, Mo.  
 ♦ **United States Chain & Forging Co.**, Pittsburgh, Pa.  
**Verona Tool Works**, Pittsburgh, Pa.  
**Vulcan Tool Mfg. Co.**, The, Quincy, Mass.  
**Warren Tool & Forge Co.**, The, Warren, Ohio.  
**Warwood Tool Co.**, Wheeling, W. Va.

#### WEIGHERS, LOCOMOTIVE AND CAR.

**Erhardt's**—The Macleod Co., Cincinnati, O.

#### WEIGHERS, WATER.

**Armstrong**—Armstrong Mfg. Co., Springfield, O.  
**Fairbanks, Morse & Co.**, Chicago, Ill.  
**Kennicott**—Kennicott Co., Chicago Heights, Ill.  
**National**—National Weighing Machine Co., Springfield, O.  
**Tyler Underground Heating System**, Pittsburgh, Pa.  
**Willcox**—Willcox Eng. Co., Saginaw, Mich.  
**Worthington, Henry R.**, New York, N. Y.

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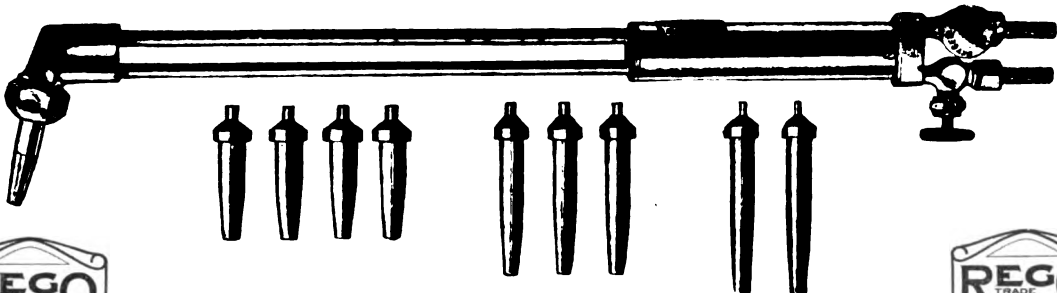
**Gurley**—W. & L. E. Gurley, Troy, N. Y.

#### WELDERS, FLUE, PNEUMATIC.

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**Draper Improved**—The Draper Mfg. Co., Port Huron, Mich.  
**Wilson Welder & Metals Co.**, Brooklyn, N. Y.

#### WELDING APPARATUS, ELECTRIC.

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Thomson—Thomson Spot Welder Co., Lynn, Mass.  
Universal Electric Welding Co., Long Island City, N. Y.  
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.  
Winfield Electric Welding Machine Co., Warren, Ohio.  
Zeus—Gibbs Instrument Co., Pittsburgh, Pa.

#### WELDING AND CUTTING APPARATUS, OXYGEN-ACETYLENE.

Admiral—Admiral Welding Mach. Co., Kansas City, Mo.  
Astra—Ashton, Laird & Co., New York, N. Y.  
Baird Pneumatic Tool Co., Topeka, Kan.  
Bermo—Bertschy Engineering Co., Cedar Rapids, Ia.  
Best—Best Co., Pittsburgh, Pa.  
Bishop & Babcock Co., The, Cleveland, O.  
Buckeye—The Macleod Co., Cincinnati, O.  
Burdett Mfg. Co., Chicago, Ill.  
Carbic Mfg. Co., Duluth, Minn.  
Cox Brass Mfg. Co., Albany, N. Y.  
Davis Acetylene Co., Elkhart, Ind.  
Dyer Company, The, Cambridge, Mass.  
Economy—Economy Welding Machine Co., Kansas City, Mo.  
Eveready—Oxweld Acetylene Co., Chicago, Ill.  
Federal Brass Works, Chicago, Ill.  
General Welding & Equipment Co., Cambridge, Mass.  
Hamilton—Hamilton Welding & Mfg. Co., Hamilton, O.  
Harris Caloric Co., Cleveland, O.  
Imperial—Imperial Brass Mfg. Co., Chicago, Ill.  
Industrial Oxygen Co., New York, N. Y.  
International Oxygen Co., New York, N. Y.  
K. G. Welding & Cutting Co., New York, N. Y.  
Kilbourne & Jacobs Mfg. Co., The, Columbus, O.  
Lavoisite—Sowers Mfg. Co., Buffalo, N. Y.  
McLeod Co., The, Cincinnati, O.  
MECO—Modern Engineering Co., St. Louis, Mo.  
Messer—Messer Welding Supply Corp., Brooklyn, N. Y.  
Metal & Thermit Co., New York, N. Y.  
Metals Welding Co., Cleveland, O.  
Milburn, Alexander, Co., Baltimore, Md.  
Prest-O-Lite—The Prest-O-Lite Co., Inc., Indianapolis, Ind.  
Rego—Bastian-Blessing Co., Chicago, Ill.  
Rego—Cave Welding & Mfg. Co., Springfield, Mass.  
Russ Manufacturing Co., The, Cleveland, O.  
Schemmel Welding & Machine Works, Wapakoneta, Ohio.  
Thermalene Co., Chicago Heights, Ill.  
Tolman Mfg. Co., Boston, Mass.  
Torchweld—Torchweld Equipment Co., Chicago, Ill.  
Turner Brass Works, Sycamore, Ill.  
Varwig Mfg. Co., Cincinnati, O.  
Vulcan Process Co., Minneapolis, Minn.  
Waterhouse Welding Co., Boston, Mass.  
Weld-a-Cast—Cortland Welding Compound Co., Cortland, N. Y.  
Weldcraft—Weldcraft Equipment Co., Pittsburgh, Pa.  
Willis—Henderson-Willis Welding & Cutting Co., St. Louis, Mo.

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Eastern Range Boiler & Welding Co., Conshohocken, Pa.  
Federal—Federal Machine & Welder Co., Warren, Ohio.  
Lincoln Electric Co., The, Cleveland, O.  
Oakes Pressed Steel Co., Indianapolis, Ind.  
Petty, J. K., & Co., Inc., Philadelphia, Pa.

Pulte-Korreck Machine Co., Grand Rapids, Mich.  
Sealife, Wm. B., & Sons Co., Pittsburgh, Pa.  
Thermit Process—Goldschmidt Thermit Co., New York.  
Thomson—Thomson Electric Welding Co., Lynn, Mass.  
Vulcan Process Co., Minneapolis and Cincinnati.  
Whitlock Coil Pipe Co., The, Hartford, Conn.  
The Winfield Electric Welding Machine Co., Warren, Ohio.  
Universal Electric Welding Co., Long Island City, N. Y.  
Worcester Pressed Steel Co., Worcester, Mass.

#### WELLS THERMOMETER.

Tuxedo—Franklin Williams, New York, N. Y.

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Akron—Akron Barrow Co., Cleveland, O.  
American Clay Machinery Co., Bucyrus, O.  
American Steel Scraper & Wheelbarrow Co., Sidney, Ohio.  
Asheboro Wheelbarrow Co., Asheboro, N. C.  
Buch—Buch Mfg. Co., Elizabethtown, Pa.  
Bull Frog—Toledo Wheelbarrow Co., Toledo, O.  
Champion—The Bryan Mfg. Co., Bryan, O.  
Champion—Western Tool & Mfg. Co., Springfield, O.  
Chattanooga, Hamilton—Chattanooga Wheelbarrow Co., Chattanooga, Tenn.  
Consolidated Iron Works, Hoboken, N. J.  
Continental Car Co. of America, Louisville, Ky.  
Donnegan & Swift, New York, N. Y.  
Fairbanks Co., The, New York, N. Y.  
Fitts Mfg. & Supply Co., Frank, Boston, Mass.  
Focht Sons, Geo., Hoboken, N. J.  
Howe—Howe Scale Co., Rutland, Vt.  
Jackson Mfg. Co., Harrisburg, Pa.  
Kalamazoo Railway Supply Co., Kalamazoo, Mich.  
Kessler—Kessler Wheelbarrow Co., Philadelphia, Pa.  
K. & J.—Kilbourne & Jacobs Mfg. Co., Columbus, O.  
Lakewood Engineering Co., Cleveland, O.  
Lansing Co., Lansing, Mich.  
McWhinnie Wheelbarrow Co., Poughkeepsie, N. Y.  
National—Phillips, Doup & Co., Inc., Brooklyn, N. Y.  
New York Wheelbarrow Co., New York, N. Y.  
Obermayer Co., The, S., Cincinnati, O.  
One Complete Package—Bryan Mfg. Co., Bryan, O.  
Sackett, H. B. Screen & Chute Co., Chicago, Ill.  
Shod—Bryan Mfg. Co., Bryan, Ohio (tubular).  
Sterling—Sterling Wheelbarrow Co., West Allis, Wis.  
Syracuse—Syracuse Chilled Plow Co., Inc., Syracuse, N. Y.  
U. S.—Sidney Steel Scraper Works, Sidney, O.  
Welmer—Welmer Machine Works Co., Lebanon, Pa.  
Western Wheelbarrow Mfg. Co., South Fort Smith, Ark.  
Whitman Agricultural Co., St. Louis, Mo.  
Zering Mfg. Co., Cincinnati, O. (coal and ash).

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 Booth Felt Co., The, Brooklyn, N. Y.  
 Bridgeport—Bridgeport Belting Co., Bridgeport, Conn.  
 Bullneck—Bickford & Francis Belting Co., Buffalo, N. Y.  
 Chicago Rawhide Mfg. Co., Chicago, Ill.  
 Chicago—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Codman, F. L. & J. C., South Boston, Mass.  
 Cocksackie Wheel & Mfg. Co., Cocksackie, N. Y.  
 Devine Bros., Utica, N. Y.  
 Eastern Felt Co., Winchester, Mass.—Trade names—Independence, U. S. A., X. L.  
 Flint, Warren F., Boston, Mass.  
 Hanson & Van Winkle Co., Newark, N. J.  
 Jackson Mills Emery Co., Easton, Pa.  
 Munning, A. P. & Co., Matawan, N. J.  
 New England Buff Co., Boston, Mass.  
 Ohio Buff & Mfg. Co., The, Cincinnati, O.  
 Rhodes, James H. Co., Chicago, Ill.  
 SI—Williamsville Buff Mfg. Co., Danielson, Conn.  
 Spanish & Mexican—Eastern Felt Co., Winchester, Mass.  
 Star—Williamsville Buff Mfg. Co., Danielson, Conn.  
 Tingle, Brown & Co., New York, N. Y.  
 Union Elevator & Machine Co., Chicago, Ill.  
 Webb Mfg. Co., Newark, N. J.  
 Wood, J. R., Supply Co., The, Cincinnati, O.

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 Scottsdale—Scottsdale Machine & Mfg. Co., Scottsdale, Pa.  
 Stephens-Adamson Mfg. Co., Aurora, Ill.

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 Caldwell & Son Co., H. W., Chicago, Ill.  
 ♦ Dodge Sales & Engineering Co., Mishawaka, Ind.  
 Falls Clutch & Machine Co., Cuyahoga Falls, O.  
 Hanson Clutch & Machinery Co., Tiffin, O.  
 ♦ Hill Clutch Co., The, Cleveland, O.  
 Huntville Foundry & Machine Co., Huntsville, Ala.  
 Lane & Bodley Co., The, Cincinnati, Ohio.  
 ♦ Link-Belt Company, Chicago and Philadelphia, Pa.  
 ♦ Medart Patent Pulley Co., St. Louis, Mo.  
 Mesta Machine Co., Pittsburgh, Pa.  
 Minster Machine Co., Minster, O.  
 Naylor Bros., Peekskill, N. Y.  
 Pyott Foundry Co., Chicago, Ill.  
 Pyott, Geo. W., Co., Chicago, Ill.  
 Southwark Foundry & Machine Co., Philadelphia, Pa.  
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 ♦ Wood's, T. B., Sons Co., Chambersburg, Pa.

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 ♦ Alundum—Norton Co., Worcester, Mass.  
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 Bay State Emery Wheel Co., Worcester, Mass.  
 Bridgeport Safety Emery Wheel Co., The, Bridgeport, Conn.  
 Carbor-Alumina, Silaxon—Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.  
 Carbor-Alumina, Cortland—Cortland Grinding Wheel Corp., Cortland, N. Y.  
 Carbofed—Vitrified Wheel Co., The, Westfield, Mass.  
 ♦ Carborundum Company, The, Niagara Falls, N. Y.  
 Chicago—Chicago Wheel & Mfg. Co., Chicago, Ill.  
 Clevite, Clevorundum—Cleveland Abrasive Wheel Co., The, Cleveland, O.  
 ♦ Crystolon—Norton Co., Worcester, Mass.  
 Cutter & Wood Supply Co., Boston, Mass.  
 Dayton Grinding Wheel Co., The, Dayton, O.  
 Detroit Star—Detroit Star Grinding Wheel Co., Detroit, Mich.  
 Diamond Band—General Grinding Wheel Corp., Philadelphia, Pa.  
 Eagle—Eagle Emery & Corundum Wheel Co., Chicago, Ill.

Electric Emery Wheel Co., The, Newark, N. J.  
 Fallonite—Fallonite Co., Newtown, Pa.  
 Gardner's Improved—Gardner Machine Co., Beloit, Wis.  
 Griffiths, Albert, Saw Co., Boston, Mass.  
 Hampden Corundum Wheel Co., Springfield, Mass.  
 Ingersoll-Rand Co., New York, N. Y.  
 Jasper—H. A. Rogers Co., New York, N. Y.  
 Maxf Grinding Wheel Corp., Chicago, Ill.  
 National Grinding Wheel Co., Inc., Buffalo, N. Y.  
 ♦ New York Belting & Packing Co., New York, N. Y.  
 ♦ Norton Crystalon—Norton Co., Worcester, Mass.  
 Ottoman—H. A. Stiles & Co., Boston, Mass.  
 Peninsular Grinding Wheel Co., Detroit, Mich.  
 Pennsylvania—Pennsylvania Grinding Wheel Co., Philadelphia, Pa.  
 Pike Mfg. Co., Pike, N. H.  
 Pittsburgh Grinding Wheel Co., Rochester, Pa.  
 Ramsdell Specialty Co., Worcester, Mass.  
 Richardson—Waltham Emery Wheel Co., Waltham, Mass.  
 Rogers, S. C., & Co., Buffalo, N. Y. (flat and cup).  
 Ryerson, Joseph T., & Son, Chicago, Ill.  
 Safety Emery Wheel Co., Springfield, O.  
 Scranton Whetstone & Abrasive Wheel Co., Scranton, Pa.  
 ♦ Sic—The Corundum Wheel Co., Niagara Falls, N. Y.  
 ♦ Sterling Grinding Wheel Mfg. Co., Tiffin, O.  
 Sterling, Sterlith, Sterbon—L. Best Co., New York.  
 Stiles, H. A., & Co., Boston, Mass.  
 Superior Corundum Wheel Co., Waltham, Mass.  
 Tanite Co., The, Stroudsburg, Pa.  
 Unitex—Unitex Company, Chicago, Ill.  
 Vitrified Wheel Co., The, Westfield, Mass.  
 ♦ Vulcanite—New York Belting & Packing Co., New York, N. Y.  
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 Crosby Steam Gauge & Valve Co., Boston, Mass.  
 Faultless—Trill Indicator Co., Corry, Pa.  
 Ideal—John S. Bushnell & Co., New York, N. Y.  
 Ideal—Richard Thompson & Co., New York, N. Y.  
 Jost's, Edmund, Sons, Newark, N. J.  
 Lippincott—A. C. Lippincott Co., East Orange, N. J.  
 R. T. & Co.'s Ideal—Richard Thompson & Co., New York, N. Y.  
 Star—Star Brass Mfg. Co., Boston, Mass.  
 Victor—James L. Robertson & Sons, New York, N. Y.  
 Watts Regulator Co., Lawrence, Mass.

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 Huntville Fdy. & Mach. Co., Huntsville, Ala.  
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 The Michigan—S. C. Overpack, Manistee, Mich.  
 Strelch, A., & Bro. Co., Oshkosh, Wis.

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 Hercules Mfg. Co., Centerville, Iowa.  
 Indiana Foundry Co., Indiana, Pa.  
 Kanawha Mine Car Co., Charleston, W. Va.  
 Koppel Industrial Car & Equipment Co., Koppel, Pa.  
 Lobdell Car Wheel Co., Wilmington, Del.  
 Oliver, Wm. J., Mfg. Co., Knoxville, Tenn.  
 Pressed Steel Car Co., Pittsburgh, Pa.  
 South Side Foundry & Machine Works, Charleston, W. Va.  
 Star Mfg. Co., The, New Lexington, O.  
 Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Whitney—Sanford-Day Iron Works, Knoxville, Tenn.

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(See also Wheels, Water.)

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 Nye Knurled—Nye Tool & Machine Works, Chicago.  
 Saunders Pat.—Barnes Tool Co., New Haven, Conn.  
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 Baldwin—Baldwin Chain Mfg. Co., Worcester, Mass.  
 Bartlett & Snow Co., C. O., Cleveland, O.  
 Blount & Lovell, Boston, Mass.  
 Boston Gear Works, Quincy, Mass.  
 Bullock, C. K. Co., Philadelphia, Pa.  
 Caldwell, H. W., & Son Co., Chicago, Ill.  
 Chain Belt Co., Milwaukee, Wis.  
 Chisholm-Moore Mfg. Co., Cleveland, O.  
 Christiana Machine Co., Christiana, Pa.  
 Constant, B. S., Mfg. Co., The, Bloomington, Ill.  
 Filer & Stowell Co., Milwaukee, Wis.  
 Fuller-Lehigh Co., Fullerton, Pa.  
 Grant Gear Works, Boston, Mass.  
 Great Western Mfg. Co., Leavenworth, Kan.  
 Howe Chain Co., Muskegon, Mich.  
 Huntsville Foundry & Machine Co., Huntsville, Ala.  
 Jeffrey—Jeffrey Mfg. Co., Columbus, O.  
 Jones, W. A., Foundry & Machine Co., Chicago, Ill.  
 Link-Belt Company, Chicago, Ill.  
 Medart Patent Pulley Co., St. Louis, Mo.  
 Meese & Gottfried Co., San Francisco, Cal.  
 Michigan Sprocket Chain Co., Detroit, Mich.  
 Montgomery Coal Washing & Mfg. Co., Birmingham, Ala.  
 Morse Chain Co., Ithaca, N. Y.  
 Nordyke & Marmion Co., Indianapolis, Ind.  
 Pittsburgh Conveying Machinery Co., Pittsburgh, Pa.  
 Pyott, Geo. W., Co., Chicago, Ill.  
 Robins Conveying Belt Co., New York.  
 Schultz, A. L., & Son, Chicago, Ill.  
 Stevenson Gear Co., Indianapolis, Ind.  
 Tisco—Taylor-Wharton Iron & Steel Co., High Bridge, N. J.  
 Van Dorn & Dutton Co., The, Cleveland, O.  
 Webster Mfg. Co., The, Chicago, Ill.  
 Weller Mfg. Co., Chicago, Ill.  
 Wolf Co., The, Chambersburg, Pa.

**WHEELS, STEEL AND WIRE.**

(See also "Brushes, Wire.")

Economy—Cleveland Osborn Mfg. Co., New York, N. Y.  
 Electric Wheel Co., Quincy, Ill.  
 Heartley Machine, Variety Iron & Tool Works, Toledo, O. (for hand carts, wheelbarrows, children's carriages, toys and wagons.)

**WHEELS, TIRE MEASURING.**

Green River—Greenfield Tap & Die Corp., Greenfield, Mass.

**WHEELS, TRACTION.**

Howe Chain Co., Muskegon, Mich.  
 Link-Belt Co., Chicago, and Philadelphia.

**WHEELS AND ROPS, TROLLEY.**

Eureka Co., The, North East, Pa.  
 Gilbert, A., & Sons Brass Foundry Co., St. Louis, Mo.  
 National Brass Mfg. Co., Rochester, N. Y.  
 Nokut—Western Wheelbarrow Mfg. Co., South Fort Smith, Ark.

**WHEELS AND CASTERS, TRUCK, ETC.**

Acme—The Schatz Mfg. Co., Poughkeepsie, N. Y. (ball bearing).  
 Armstrong Patent, Armstrong—Armstrong Truck Co., North Wales, Pa.  
 Bassick Co., The, New York, N. Y.  
 B. G.—Belt Grip Pulley Co., Buffalo, N. Y.  
 Bond Foundry & Machinery Co., Manheim, Pa.  
 Boss, Martin, Stengel—Phoenix Caster Co., Indianapolis, Ind.  
 Chapman—Transmission Ball Bearing Co., Inc., Buffalo, N. Y. (Ball-bearing).  
 Clark, Geo. P., Co., The, Windsor Locks, Conn. (iron, rubber, fibre).  
 Dayton—Dayton Steel Foundry Co., The, Dayton, O.  
 Delaware Hard Fibre Co., Wilmington, Del.  
 Divine Cushion—Divine Bros. Co., Utica, N. Y.  
 Easton—Easton Car & Construction Co., Easton, Pa.  
 Efemco—Foster Merriam & Co., Meriden, Conn.  
 Elastic Tip Co., Boston, Mass.  
 Electric Wheel Co., Quincy, Ill.  
 Empire—Empire Mfg. Co., Quincy, Ill.  
 Fairmont Gas Engine & Railway Motor Co., Fairmont, Minn.  
 Francis, Chas. E., Co., Rushville, Ind.

Harris & Reed Mfg. Co., Chicago, Ill. (Ball Bearing).  
 Harvard, Gem, Ruby—The Bassick Co., Bridgeport, Conn.  
 Kwalley Kaster, Run Tite—The Hamilton Caster & Mfg. Co., Hamilton, O.  
 Lansing Co., Lansing, Mich.  
 Martin, Boss, Stengel, Rex—Phoenix Caster Co., Indianapolis, Ind.  
 Morris Patent—Morris Truck & Wheel Co., Inc., Philadelphia, Pa.  
 Mullins Body Corp., Stamping Dept. A., Salem, O.  
 Nokut—Western Wheelbarrow Mfg. Co., So. Fort Smith, Ark.  
 Payson—Payson Mfg. Co., The, Chicago, Ill.  
 Peck, Stow & Wilcox Co., New York, N. Y.  
 Schenck, M. B., Co., The, Meriden, Conn.  
 Service—Haskins, R. G., Chicago, Ill.  
 Sizer Forge Co., Buffalo, N. Y.  
 Standard—Standard Scale & Supply Co., Pittsburgh, Pa.  
 Stearns & Co., E. C., Syracuse, N. Y.  
 Sterling Wheelbarrow Co., West Allis, Wis.  
 Sweet, A. L., Iron Works, Medina, N. Y.  
 Trukaster—Hamilton Caster & Mfg. Co., Hamilton, Ohio (double wheel and single wheel).  
 West Steel Casting Co., Cleveland, O.  
 Wolverine Caster Co., Traverse City, Mich.

**WHEELS AND HANDLES, VALVE, METAL.**

Always Cold—The H. A. Matthews Mfg. Co., Seymour, Conn.  
 American Foundry & Mfg. Co., St. Louis, Mo.  
 Empire—Empire Mfg. Co., Quincy, Ill.  
 Forgy—P. Forgy Mfg. Co., Somerville, Mass. (Pressed steel).  
 Kelly & Jones Co., The, Greensburg, Pa.  
 Lunkenheimer Co., Cincinnati, O.  
 Peck, Stow & Wilcox Co., New York, N. Y.  
 Pittsburgh Valve & Fittings Co., Barborton, O.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Queen City Brass & Iron Works, Cincinnati, O.  
 Walworth Mfg. Co., Boston, Mass.

**WHEELS, VALVE, PORCELAIN.**

Hutter, Karl, Inc., New York, N. Y.

**WHEELS, VALVE OPERATING, SPROCKET.**

Babbitt—Babbitt Steam Specialty Co., New Bedford, Mass.

**WHEELS, VALVE, WIRE.**

Hodge & Stone, Middletown, Conn.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Noburn—L. L. Lord & Co., Meadville, Pa.  
 Prouty—Sawyer Tool Mfg. Co., Fitchburg, Mass.  
 Rudge Whitworth—Standard Roller Bearing Co., Philadelphia.

**WHEELS, VALVE, WOOD.**

Detroit—Detroit Lubricator Co., Detroit, Mich.  
 Handy—J. O'Meara, Inc., New York.  
 Holton—Abbott Mfg. Co., West Somerville, Mass.  
 McEae & Roberts Co., The, Detroit, Mich.  
 Marble Co., W. P., Boston, Mass.  
 Ohio Brass Co., The, Mansfield, O.  
 O'Meara's Pat.—J. O'Meara, Inc., New York.  
 Piqua Handle & Mfg. Co., Piqua, O.  
 Powell, Wm., Co., The, Cincinnati, O.  
 Stiles & Co., H. A., Boston, Mass.  
 Walworth Mfg. Co., Boston, Mass.

**WHEELS, VENTILATING.**

(See "Fans, Exhaust, Heating and Ventilating".)

**WHEELS, WATER.**

Allis-Chalmers Co., Milwaukee, Wis.  
 Almond—T. R. Almond Mfg. Co., Ashburnham, Mass.  
 Bartley, Wm., & Sons, Bartley, N. J.  
 Blue Ball Machine Works, Blue Ball, Pa.  
 Chase Turbine Mfg. Co., Orange, Mass.  
 De Remer Water Wheel Co., Denver, Colo.  
 Hercules—Holyoke Machine Co., Worcester, Mass.  
 Humphrey Machine Co., Keene, N. H.  
 Hunt—Rodney Hunt Machine Co., Orange, Mass.  
 Fitz, I. X. L., Burnham—Fitz Water Wheel Co., Hanover, Pa. (overshot).  
 Little Giant—Munson Mill Machinery Co., Inc., Utica, N. Y.  
 New American—The Dayton-Globe Iron Works Co., Dayton, O.  
 Pelton—The Pelton Water Wheel Co., San Francisco, Cal.  
 Pelton—Seattle Machine Works, Seattle, Wash.  
 Rindon—Alcott Turbine Co., Mt. Holly, N. J.  
 Samson—The James Leffel & Co., Springfield, O.  
 Smith—Morgan-Smith Co., York, Pa.  
 Squier Mfg. Co., Geo. L., Buffalo, N. Y.  
 Trump—Trump Mfg. Co., Springfield, O.  
 Tuerk—Tuerk Water Motor Co., Chicago, Ill.  
 Tuthill—United Iron Works, Oakland, Cal.  
 Wellman-Sever-Morgan Co., Cleveland, O.  
 Wolf Co., The, Chambersburg, Pa.

**WATER WHEEL HARNESS.**

- ◆ Dodge Sales & Mfg. Co., Mishawaka, Ind.
- Wellman-Sever-Morgan Co., Cleveland, O.

**WHISTLES, CAST IRON.**

- ◆ Powell, Wm., Co., The, Cincinnati, O.
- ◆ The Sinker-Davis Co., Indianapolis, Ind.

**WHISTLES, STEAM AND AIR.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- American Safety Lamp & Mine Supply Co., Scranton, Pa.
- Ashton Valve Co., Boston, Mass.
- Belknap Mfg. Co., The, Bridgeport, Conn.
- Boston Steam Specialty Co., Boston, Mass.
- Buckeye Iron & Brass Works, Dayton, O.
- CC—Crane Co., Chicago, Ill.
- Crane—Crane Co., Chicago, Ill.
- Crosby Steam Gauge & Valve Co., Boston, Mass.
- Edna Brass Mfg. Co., The, Cincinnati, O.
- Farnan Brass Works, Cleveland, O.
- Fire Electric—C. M. Lovsted & Co., Seattle, Wash.
- Garratt & Co., W. T., San Francisco, Cal.
- Haydenville Co., The, Haydenville, Mass.
- ◆ Hooster—The Sinker-Davis Co., Indianapolis, Ind.
- ◆ Jenkins Bros., New York, N. Y.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Lonergan, J. E., Co., Philadelphia, Pa.
- ◆ Lunkenheimer Co., The, Cincinnati, O.
- Mill Electric—C. M. Lovsted & Co., Seattle, Wash.
- Nathan Mfg. Co., New York, N. Y.
- ◆ Ohio Brass Co., The, Mansfield, O.
- Old Noisy—Walter A. Zeinicker Supply Co., St. Louis, Mo.
- ◆ Powell Co., The Wm., Cincinnati, O.
- Schaeffer & Budenberg Mfg. Co., The, Brooklyn, N. Y.
- South Park Machine & Supply Co., Port Chester, Mich.
- Standard Gauge Mfg. Co., Foxboro, Mass.
- Star Brass Mfg. Co., Boston, Mass.
- Toots-E—C. M. Lovsted & Co., Seattle, Wash.
- Union Water Meter Co., Worcester, Mass.
- Westinghouse Traction Brake Co., Pittsburg, Pa.
- Williams Valve Co., The D. T., Cincinnati, O.

**WHISTLES, STEAM, ORDER.**

- ◆ American—American Steam Gauge & Valve Mfg. Co., Boston, Mass.
- Crosby—Crosby Steam Gauge & Valve Co., Boston, Mass.
- Curran—Northern Metallic Packing Co., St. Paul, Minn.
- Crane—Crane Co., Chicago, Ill.
- Edna Brass Mfg. Co., The, Cincinnati, O.
- ◆ Kelly & Jones Co., The, Greensburg, Pa.
- Kinsley Mfg. Co., Bridgeport, Conn.
- Lonergan—Lonergan, J. E., Co., Philadelphia, Pa.
- ◆ Lunkenheimer Co., The, Cincinnati, O. (low pressure).
- McNab & Harlin Mfg. Co., New York, N. Y.
- Moak Machine & Tool Co., Port Huron, Mich.
- ◆ Powell Co., The Wm., Cincinnati, O.
- ◆ Walworth Mfg. Co., Boston, Mass.

**WHISTLES, STEAM, MOCKING BIRD.**

- CC—Crane Co., Chicago, Ill.
- ◆ Mocking Bird, Tritone—Lunkenheimer Co., The, Cincinnati, O.

**WHISTLES, STEAM, SIREN.**

(See also "Sirens, Electric.")

- Moak Machine & Tool Co., Port Huron, Mich.
- Star—Star Brass Mfg. Co., Boston, Mass.

**WHITE FINISH, FOUNDRY.**

- Tripoli—Hill & Griffith Co., Cincinnati, O.

**WHITE METAL ALLOYS.**

- Erie White Metal Co., Erie, Pa.
- Leddell Metals Co., Inc., Long Island City, N. Y. (Trade names—Bee, Armature, Journal, Torrev.)
- Lissberger, Marks & Son, Inc., Long Island City, N. Y.
- Magnolia Metal Co., New York, N. Y.
- Motex—I. M. Jacobson & Sons Co., Detroit, Mich.
- Sandoval Zinc Co., Chicago, Ill.
- Silverbright—Seymour Mfg. Co., Seymour, Conn.

**WICKING, COTTON.**

- Berkeley—Berkeley Mfg. & Supply Co., Jersey City, N. J.
- Bishop, Robert W., Mfg. Co., Boston, Mass.
- Estes Mills, Fall River, Mass.
- Mannasolt Mfg. Co., Fall River, Mass.
- Walters Mfg. Co., Pittsburgh, Pa.

**WICKING, FELT, OIL.**

- Advance Felt & Cutting Co., Chicago, Ill.
- Booth—The Booth Felt Co., Brooklyn, N. Y.
- Lyons Felt Co., Brooklyn, N. Y.

**WINCHES, PNEUMATIC.**

Chicago Pneumatic Tool Co., New York.

**WINCHES AND WINDLASSES.**

- Allis-Chalmers Co., Milwaukee, Wis.
- A. E. Co.—American Engineering Co., Philadelphia, Pa.
- American Hoist & Derrick Co., St. Paul, Minn. (anchor and ship).
- Brownhoist—Brown Hoisting Machinery Co., Cleveland, O.
- Buffalo Contractors' Plant Corp., Buffalo, N. Y.
- Canton Foundry & Machine Co., Canton, Ohio.
- Chase Machine Co., The, Cleveland, O.
- ◆ Chisholm-Moore Mfg. Co., Cleveland, O.
- Clark Engine & Boiler Co., Kalamazoo, Mich.
- Clyde Iron Works, Duluth, Minn.
- Detroit Hoist & Machine Co., Detroit, Mich.
- Dobbie Fdy. & Machine Co., Niagara Falls, N. Y.
- Erie—Erie Clutch & Pulley Co., Erie, Pa.
- Filer & Stowell Co., Milwaukee, Wis.
- Flory—Lenher Engineering Co., New York, N. Y.
- Flory, S., Mfg. Co., Bangor, Pa.
- Huntsville Foundry & Machine Works, Huntsville, Ala.
- Indiana Foundry Co., Indiana, Pa.
- Klemm, E. R., Chicago, Ill.
- Laughlin, Thomas Co., The, Portland, Me.
- Lenher Engineering Co., New York, N. Y. (ship).
- Lidgerwood Mfg. Co., New York.
- Maine Electric Co., Portland, Me. (steam and electric).
- Marine Iron Works, Chicago, Ill.
- Marine Manufacturing & Supply Co., New York.
- McKinnon Iron Works Co., Ashtabula, Ohio.
- Mead & Morrison Mfg. Co., Boston, Mass.
- Meese & Gottfried Co., San Francisco, Cal.
- Mundy Hoisting Engine Co., J. S., Newark, N. J.
- National Hoisting Engine Co., Harrison, N. J.
- Parker, S. E., Chicago, Ill.
- Round & Son, D., Cleveland, O.
- ◆ Safety—The Yale & Towne Mfg. Co., New York, N. Y.
- Saugen Derrick Co., Chicago, Ill.
- Street Brothers Machine Works, Chattanooga, Tenn.
- Superior Iron Works Co., Superior, Wis.
- Torry Roller Bushing Works, Bath, Me. (gypsy)
- Wilcox, Crittenden & Co., Inc., Middletown, Conn.

**WINDMILLS.**

- Aermotor Co., Chicago, Ill.
- Baizley Iron Works, The John, Philadelphia, Pa.
- Baker—The Heller-Ailer Co., Napoleon, O.
- Baltimore Coöperage Co., Baltimore, Md.
- Boss, Carter, Capital, Capital Vaneless, Falcon—Dempster Mfg. & Supply Co., Des Moines, Iowa.
- Butler Co., The, Butler, Ind. Trade names—Butler, Butler and Deffance, Reliance and Butler, Texas Pattern.
- Caldwell Co., W. E., Louisville, Ky.
- Castle—A. M. Castle Engineering Co., La Crosse, Wis.
- Challenge, Dandy—Challenge Co., Batavia, Ill.
- Corcoran—A. J. Corcoran, Inc., Jersey City, N. J.
- Dempster—Dempster Mill Mfg. Co., Beatrice, Neb.
- Fairbanks-Morse, Eclipse—Fairbanks-Morse & Co., Chicago, Ill.
- Goodhue—Appleton Mfg. Co., Batavia, Ill.
- Halladay Standard, Model B. D. E.—U. S. Wind Engine & Pump Co., Batavia, Ill.
- Hummer, Tip Top, Wonder—Elgin Wind, Power & Pump Co., Elgin, Ill.
- Horicon—Horicon Windmill Co., Horicon, Wis.
- Imperial—Mast, Foos & Co., Springfield, Ohio.
- Mogul—Woodmanse Mfg. Co., Freeport, Ill.
- Monitor—Baker Mfg. Co., Evansville, Wis.
- Red Cross—The Red Cross Mfg. Co., Bluffton, Ind.
- Standard—Axtell Machine Co., Ft. Worth, Tex.
- Star—Flint & Walling Mfg. Co., Kendallville, Ind.
- Stover Manufacturing & Engine Co., Freeport, Ill.
- Superior, Duplex—Duplex Mfg. Co., Superior, Wis.
- Wistrand Mfg. Co., Galva, Ill. (wheels only).
- Woodmanse—Woodmanse Mfg. Co., Freeport, Ill.

**WIPERS, MACHINE.**

(See "Cloths, Wiping Machine.")

**WIRE, ALUMINUM.**

- Aluminum Co. of America, Pittsburgh, Pa.
- ◆ American Steel & Wire Co., Chicago, Ill.
- Driver-Harris Wire Co., Harrison, N. J.
- Electrical Alloy Co., Morristown, N. J.
- Michigan Wire Cloth Co., Detroit, Mich.

**WIRE, BRASS, COPPER, NICKEL SILVER, AND PHOSPHOR BRONZE.**

- Ambrac—American Brass Co., The, Waterbury, Conn.
- ◆ American Steel & Wire Co., Chicago, Ill.
- Ansonia Brass & Copper Co., Ansonia, Conn.
- Barnes Co., The Wallace, Bristol, Conn.
- Bridgeport Brass Co., Bridgeport, Conn.
- Bristol Brass Co., Bristol, Conn.
- Cable, Wm., Excelsior Wire Mfg. Co., The, Brooklyn, N. Y.



Cambridge Steel Co., Johnstown, Pa.  
 Clendenin Bros., Baltimore, Md.  
 Detroit Copper & Brass Rolling Mills, Detroit, Mich.  
 Driver-Harris Wire Co., Harris, N. J.  
 Gilbert, A., & Sons Brass Foundry Co., St. Louis, Mo.  
 Hudson Wire Co., Ossining, N. Y.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Lathaw Steel & Metal Products Corp., New York, N. Y.  
 Michigan Copper & Brass Co., Detroit, Mich.  
 Michigan Wire Cloth Co., Detroit, Mich.  
 Moon, Geo. C., Co., Garwood, N. J.  
 National Brass & Copper Tube Co., New York, N. Y.  
 National Conduit & Cable Co., Inc., Hastings-on-Hudson, N. Y.  
 Newark Wire Cloth Co., Newark, N. J.  
 Northwestern Barb Wire Co., Inc., Sterling, Ill.  
 Ohio Brass & Copper Co., The, Cincinnati, O.  
 Omega-Riverside Metal Co., Riverside, N. J.  
 Plume & Atwood Mfg. Co., Waterbury, Conn.  
 Roebbing—John A. Roebbing's Sons Co., Trenton, N. J.  
 Scoville Mfg. Co., Waterbury, Conn.  
 Seymour Mfg. Co., The, Seymour, Conn.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.  
 Weldclad—Duplex Metals Co., Chester, Pa.  
 Wolverine—Michigan Copper & Brass Co., The, Detroit, Mich.

**WIRE, CLOTH, MONEL METAL.**

Michigan Wire Cloth Co., Detroit, Mich.

**WIRE, ELECTRICAL.**

Ambrac—American Brass Co., Waterbury, Conn.  
 ♦ Americore—American Steel & Wire Co., Chicago, Delabeston—D. & W. Fuse Co., Works of General Electric Co., Providence, R. I.  
 General Electric Co., Schenectady, N. Y.  
 Western Electric Co., Inc., Chicago, Ill.

**WIRE, FIRE DETECTING.**

Foamite Firefoam Co., New York, N. Y.

**WIRE, HOLLOW.**

Rome Hollow Wire & Tube Co., Rome, N. Y.

**WIRE, LEAD.**

Lissberger, Marks & Son, Inc., Long Island City, N. Y.  
 Northwest Lead Co., Seattle, Wash.  
 Union Smelting & Refining Co., Inc., Newark, N. J.  
 United Lead Co., New York, N. Y.

**WIRE, LEAD COVERED.**

Lissberger & Son, Inc., Marks, Long Island City, N. Y.

**WIRE, LEADING AND CONNECTING.**

Atlas Powder Co., Wilmington, Del.  
 ♦ Du Pont, E. I., de Nemours Powder Co., Wilmington, Del.  
 Hercules Powder Co., Wilmington, Del.

**WIRE, MOULDER'S WAX.**

C. W. W.—Columbia Wax Works, New York.  
 Stiles, H. A. & Co., Boston, Mass.  
 Will & Baumer Co., The, Syracuse, N. Y.

**WIRE, MUSIC AND PIANO.**

Fischer & Hayes Rope & Steel Co., Chicago, Ill.

**WIRE, PHOSPHOR BRONZE.**

Bridgeport Brass Co., New York, N. Y.  
 Merchant & Evans Co., Philadelphia, Pa.  
 Michigan Wire Cloth Co., Detroit, Mich.  
 Phosphor Bronze Smelting Co., Philadelphia, Pa.  
 Riverside Metal Co., Riverside, N. J.  
 Seymour Mfg. Co., The, Seymour, Conn.  
 Star—U. T. Hungerford Brass & Copper Co., New York, N. Y.

**WIRE AND ROD, FINISH.**

Boston Gear Works, Norfolk Downs, Mass.  
 Meisselbach-Catucci Mfg. Co., Newark, N. J.  
 Morgan Spring Co., Worcester, Mass.  
 Rathbone, A. B. & J., Palmer, Mass.  
 Welch, T. F. & Co., Boston, Mass.

**WIRE, SIGNAL.**

Amerite—American Steel & Wire Co., Chicago, Ill.

**WIRE, SOLDER.**

Keester—Chicago Solder Co., Chicago, Ill. (self fluxing).  
 Syracuse—United American Metals Corp., Brooklyn, N. Y.  
 Wildes' Son, Inc., Thos., New York, N. Y.

**WIRE, STEEL.**

♦ American Steel & Wire Co., Chicago, Ill.  
 Barnes Co., The Wallace, Bristol, Conn.  
 Blancke Co., Inc., L. C. (music), New York, N. Y.  
 Cable, Wm., Excelsior Wire Mfg. Co., The, Brooklyn, N. Y.  
 Cambridge Steel Co., Johnstown, Pa.  
 Delaware Steel Co., New York.  
 Fischer & Hayes Rope & Steel Co., Chicago, Ill.  
 Gulf States Steel Co., Birmingham, Ala.  
 Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Interstate Iron & Steel Co., Chicago, Ill.  
 Keystone Steel & Wire Co., Peoria, Ill.  
 Michigan Wire Cloth Co., Detroit, Mich.  
 Pittsburgh Tool Steel Wire Co., Monaca Pa. (Tool).  
 ♦ Pittsburgh Perfect—Pittsburgh Steel Co., Pittsburgh, Pa.  
 Roebbing—John A. Roebbing's Sons Co., Trenton, N. J.  
 Ryerson, Joseph T., & Son, Chicago, Ill.  
 Seneca Wire & Mfg. Co., Fostoria, O.  
 Springfield Spring Co., Springfield, O.  
 Townsend, C. C. & E. P. Co., New Brighton, Pa.  
 Tyler, The W. S., Co., Cleveland, O.  
 Washburn Wire Co., Phillipsdale, R. I.  
 ♦ Waterbury Co., New York, N. Y.  
 Wickwire Spencer Steel Corp., New York, N. Y.  
 ♦ Youngstown Sheet & Tube Co., Youngstown, O.

**WIRE STRAIGHTENERS AND CUTTERS.**

(See also "Machinery, Wire Forming.")

Cracker Jack—Franklin Mfg. Co., New Haven, Conn.  
 Worthington Pump & Machinery Corp., New York

**WIRE, THREADED.**

Columbus Brass Co., Columbus, O.  
 The Blake & Johnson Co., Waterbury, Conn.

**WIRE, WELDING.**

(See "Rods and Wire, Welding.")

**WIRES, MEASURING FOR THREAD INSPECTION.**

Seaboldt—B. Seaboldt Corp., New York, N. Y.

**WOOD, ASBESTOS.**

Dominion Asbestos and Rubber Corp., New York.  
 ♦ Johns-Manville, Inc., New York, N. Y.

**WOODWORK, PLUMBERS.**

(See also "Seats" and "Tanks.")

American Sanitary Works, New York, N. Y. (unfinished).  
 American—American Wood Work Mfg. Co., Evansville, Ind.  
 Badger Line—Plumbers Woodwork Co., Algoma, Wis.  
 Becker Mfg. Co., The, Marietta, O.  
 Berglass Mfg. Co., M. P., Brooklyn, N. Y.  
 B. O. T. Mfg. Co., Trenton, N. J.  
 Bre Hygienic—B. R. E. Mfg. Co., Boston, Mass.  
 Buckeye—James Mfg. Co., Canton, O.  
 Burrows Mfg. Co., The Wm., New York, N. Y.  
 C. & D.—Coyne & Delany Co., Brooklyn, N. Y.  
 Church Mfg. Co., C. F., Holyoke, Mass. (white).  
 Clover—J. C. Eichman Mfg. Co., Baltimore, Md.  
 Concord Woodworking Co., Concord, N. H.  
 Douglas Co., The John, Cincinnati, O.  
 Emery, Wm. S., New York, N. Y.  
 Haydenville Co., The, Haydenville, Mass.  
 Heap & Sons, Wm., Grand Haven, Mich.  
 Kant-Split—Germann Bros. Co., Saginaw, Mich.  
 Knott Mfg. Co., Tell City, Ind.  
 Leclair Cabinet Works, Edwardsville, Ill.  
 Lipp, Louis, Co., Cincinnati, Ohio.  
 McLane Quality—McLane Mfg. Co., Milford, N. H.  
 Miller, Chas. A., Co., Sturgis, Mich.  
 Nelson, N. O., Mfg. Co., St. Louis, Mo.  
 Never-Split—Never-Split Seat Co., Evansville, Ind.  
 Olmstead-Thomson Mfg. Co., The, New Britain, Conn.  
 Omaha—The Galaro Co., New York, N. Y. (white).  
 Peerless—Peerless Tank & Seat Works, Evansville, Ind.  
 Perfect Tank & Seat Co., Syracuse, N. Y.  
 Pfau—The Pfau Mfg. Co., Cincinnati, O.  
 Philadelphia Sheet Metal & Wood Works, The, Philadelphia, Pa.  
 Richmond Sanitary Mfg. Co., San Francisco, Cal.  
 Shwab Bros. Co., New York, N. Y.  
 VanArCo—Van Arnam Mfg. Co., Fort Wayne, Ind.  
 Wyco—Wyco Products Co., Springfield, Mass.

**WOODWORKERS, UNIVERSAL, VARIETY.**

(See also "Machinery, Woodworking," and "Tables, Saw.")

♦ American Saw Mill Machinery Co., Hackettstown, N. J.  
 Beach—Beach Mfg. Co., Montrose, Pa.  
 ♦ Crescent—Crescent Machine Co., Leontia, O.  
 Eveready—Oshkosh Mfg. Co., Oshkosh, Wis.  
 Famous—The Sidney Tool Co., Sidney, O.  
 Grimm—Grimm Mfg. Co., Buffalo, N. Y.  
 Master—Woodworker Mfg. Co., Detroit, Mich.  
 Schaefer Mfg. Co., Berlin, Wis.  
 Standard Machine Tool & Supply Co., Kansas City, Mo.

**WOOL, LEAD.**

Raymond Lead Co., Chicago, Ill.  
 Robertson Lead Co., James, Baltimore, Md.  
 Sidney Tool Co., The, Sidney, O.  
 Tatham & Bro., New York, N. Y.  
 United Lead Co., New York, N. Y.  
 United Lead Co., St. Paul, Minn.

**WOOL, MINERAL.**

Baltimore Roofing & Asbestos Mfg. Co., Asbestos, Md.  
 Chicago Fire Proof Covering Co., Chicago, Ill.  
 Fibreco—Union Fibre Co., Inc., Winona, Minn.  
 Johns-Manville, Inc., New York, N. Y.  
 Keasbey Co., Robt. A., New York, N. Y.  
 Mikesell Brothers Co., Chicago, Ill.  
 Union Fibre Co., Inc., Winona, Minn.  
 United States Mineral Wool Co., New York, N. Y.

**WRENCHES.**

Browning—The Browning Co., Cleveland, O.

**WRENCH ATTACHMENT FOR PIPE.**

Starrett Co., The L. S., Athol, Mass.

**WRENCHES, ADJUSTABLE.**

(Including "Monkey" and Similar Wrenches.)

- ♦ Alderman, Diamond, National, Sterling—Frank Mossberg Co., Attleboro, Mass.
- Alsteel—Boker Cutlery & Hardware Co., Inc., New York, N. Y.
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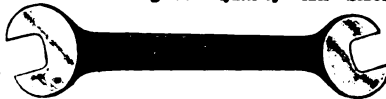
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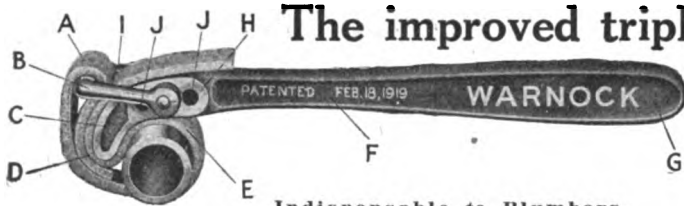
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**Adamantine—American Tap & Die Co.**, Greenfield, Mass.  
**Alert Tool Co.**, Philadelphia, Pa.  
**Armstrong Mfg. Co.**, The, Bridgeport, Conn.  
 ♦ **Bay State—Bay State Tap & Die Co.**, Mansfield, Mass.  
**B. B., 2 in 1—Bergman Tool Mfg. Co.**, Buffalo, N. Y.  
 ♦ **B. & S.—Billings & Spencer Co.**, Hartford, Conn.  
**Brubaker, W. L., & Co.**, Millersburg, Pa.  
**Bullock Mfg. Associates**, Springfield, Mass.  
 ♦ **Butterfield & Co.**, Div. Union Twist Drill Co., Derby Line, Vt.  
**Champion—Champion Blower and Forge Co.**, Lancaster, Pa.  
**Diener, Geo. W., Mfg. Co.**, Chicago, Ill.  
**Dikeman Mfg. Co.**, South Norwalk, Conn.  
**Errington, F. A.**, New York, N. Y.  
 ♦ **G. T. D.—Greenfield Tap & Die Corp.**, Greenfield, Mass.  
 ♦ **Hold Fast—West Haven Mfg. Co.**, New Haven, Conn.  
**Horsfield—Card, S. W., Mfg. Co.**, Div. of Union Twist Drill Co., Mansfield, Mass.  
 ♦ **Keystone—The Keystone Mfg. Co.**, Buffalo, N. Y.  
**Lutz—Lutz Co., Inc.**, Philadelphia, Pa.  
**Morse Twist Drill & Machine Co.**, New Bedford, Mass.  
**Nichols—Carpenter Tap & Die Co.**, J. M., Pawtucket, R. I.  
**Pratt & Whitney Co.**, Hartford, Conn.  
**Reliable—Conant & Donelson Co.**, Conway, Mass.  
 ♦ **Slide Low Jack—West Haven Mfg. Co.**, New Haven, Conn.  
**Standard Tool Co.**, Cleveland, O.  
**Starrett Co., The L. S.**, Athol, Mass.  
**Thistle—Winter Bros. Co.**, Wrentham, Mass.  
**Union Tool Co.**, Orange, Mass.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.  
**Welch, T. F., & Co.**, Boston, Mass.  
**Yankee—North Bros. Mfg. Co.**, Philadelphia, Pa.

#### WRENCHES, TAP, BATCHET.

**Moss—Ochs Company**, Cleveland, Ohio.

#### WRENCHES, TIRE AND RIM.

**Walden-Worcester—Walden-Worcester, Inc.**, Worcester, Mass.  
 ♦ **Williams, J. H., & Co.**, Brooklyn, N. Y.

#### WRINGERS, CHIP.

**Tolhurst Machine Works**, Troy, N. Y.

#### Y's PIPE.

(See also "Fittings, Pipe.")

**Abendroth Bros.**, Port Chester, N. Y.  
**Acheson Mfg. Co.**, Braddock, Pa.  
**American Foundry & Mfg. Co.**, St. Louis, Mo.  
**Blake Specialty Co.**, Rock Island, Ill.  
**Cleveland Pneumatic Tool Co.**, Cleveland, O.  
**Franklin Pipe & Foundry Co.**, Chicago, Ill.  
 ♦ **Kelly & Jones Co.**, The, Greensburg, Pa.  
**K—Kuhns Bros.**, Dayton, O.  
**Pittsburgh Valve & Fittings Co.**, Barberton, O.  
**Richardson, Edro, Brass Co.**, Baltimore, Md.  
**Sanitary Company of America**, Linfield, Pa.  
**Union Metal Wks.**, Chelsea, Mass.  
 ♦ **Walworth Mfg. Co.**, Boston, Mass.

#### YARN, FODDER (TARRED SIAL).

**American—American Mfg. Co.**, Brooklyn, N. Y.  
**Columbian Rope Co.**, Auburn, N. Y.  
**Fischer & Hayes Rope & Steel Co.**, Chicago, Ill.

**Fittler, The Edwin H., Co.**, Philadelphia, Pa.  
**Kelly, R. A., Co.**, Xenia, O.  
 ♦ **Waterbury Co., The**, New York, N. Y.  
**Winne, Frank W. & Sons, Inc.**, Philadelphia, Pa.

#### YARN AND TWINE, ASBESTOS.

**Allbestos Corporation**, Philadelphia, Pa.  
**Atlantic Asbestos Co.**, Philadelphia, Pa.  
**Asbestos—American Asbestos Co.**, Norristown, Pa.  
 ♦ **Garco—General Asbestos & Rubber Co.**, Charleston, S. C.  
**Janos Asbestos Co.**, New York, N. Y.  
**Multibestos Company**, Walpole, Mass.  
**Vulcan Asbestos Mfg. Co., Inc.**, New York, N. Y.  
**Waite-Wild Asbestos Co.**, Framingham, Mass.

#### YARN, LATH (TARRED SIAL).

**American—American Mfg. Co.**, Brooklyn, N. Y.  
**Columbian Rope Co.**, Auburn, N. Y.  
**Jumbo and Royal—St. Louis Cordage Mills**, St. Louis, Missouri.  
**Rakco—R. A. Kelly Co.**, Xenia, O.  
 ♦ **Waterbury Co., The**, New York, N. Y.  
**Whitlock—Whitlock Cordage Co.**, New York, N. Y.

#### YARN, SHAPING.

**Lubriko—Commercial Lubricating Co.**, Philadelphia.

#### YELLOW METAL, SHEETS AND RODS.

**Taunton-New Bedford Copper Co.**, Taunton, Mass.

#### YOKES ENDS.

♦ **Williams, J. H. & Co.**, Brooklyn, N. Y.

#### YOKES, DRAW-BAR.

♦ **Bethlehem Steel Co.**, Bethlehem, Pa.

#### YOKES & PULCRUMS.

♦ **Woods, T. B. Sons Co.**, Chambersburg, Pa.

#### YOKES, SNOWER.

**Butterworth—Butterworth Supply Co.**, Philadelphia, Pa.  
**Liberty Mfg. Co., The**, East Norwalk, Conn.  
**New Era Mfg. Co.**, Kalamazoo, Mich. (aluminized).

#### YOKES, TESTING.

**Lonergan—J. E. Lonergan Co.**, Philadelphia, Pa.

#### ZINC.

**American Smelters' Securities Co.**, San Francisco, Cal.  
**American Smelting & Refining Co.**, New York, N. Y.  
**American Zinc & Chemical Co.**, New York.  
**American Zinc Products Co., The**, Greencastle, Ind.  
**Ark, Brass Special—Sandoval Zinc Co.**, Chicago, Ill.  
**Bartlesville Zinc Co.**, Bartlesville, Okla.  
**Ball Bros. Glass Mfg. Co.**, Muncie, Ind.  
**Birkenstein, S. & Sons, Inc.**, Chicago, Ill.  
**Brady Brass Co.**, Jersey City, N. J.  
**Brewer Smelting & Refining Co.**, Cincinnati, O.  
**Bruce & Cook**, New York, N. Y.  
**Canfield & Sons Co.**, M. C., Newark, N. J.  
**Edgar Zinc Co.**, St. Louis, Mo.  
**Finn, John, Metal Works**, San Francisco, Calif.  
**Gilbert A., & Sons Brass Foundry Co.**, St. Louis, Mo.  
**Hartman Ingot Metal Co.**, Chicago, Ill.  
**Hungerford Brass & Copper Co.**, U. T., New York.  
**Illinois Smelting & Refining Co.**, Chicago, Ill.  
**Illinois Zinc Co.**, Peru, Ill.  
**Loewenthal Co.**, Chicago, Ill.  
**Merrillite—Merrill Co.**, San Francisco, Calif.  
**Mineral Point Zinc Co.**, Chicago, Ill.  
**National Zinc Co.**, New York, N. Y.  
**Ozark Smelting & Mining Co.**, Cleveland, O.  
**Sandoval Zinc Co.**, Chicago, Ill.  
**Shonberg, I., Inc.**, Brooklyn, N. Y. (boiler plates).  
**United Smelting & Aluminum Co.**, New Haven, Conn.  
**United Zinc Smelting Corp.**, New York.  
**Zomo—North American Copper Co.**, New York, N. Y.

#### ZINC DUST.

**American Smelting & Refining Co.**, New York, N. Y.

#### ZINC ORES.

**American Zinc, Lead & Smelting Co.**, Boston, Mass.





# ALPHABETICAL LIST OF MANUFACTURERS

of

Mill, Steam, Mine Plumbing, Heating, Lighting and Allied Lines of Supplies, Tools and Machinery in the United States, giving street address and branch offices, and specifying kinds of goods produced by each manufacturer.

◆ Member of American Supply and Machinery Manufacturers' Association

See index to advertisements on pages 7, 8 and 9

A-B Stove Co. (Gas stoves), Battle Creek, Mich.; 30 E. Randolph St., Chicago; 305 Kerephoff Bldg., Los Angeles; 210 New Telegraph Bldg., Detroit.

A. C. Electrical Mfg. Co. (Lighting systems), 4th St., U. B. Bldg., Dayton, Ohio.

A. F. S. Machine Co. (Compressors and pumps), 532 S. St. Clair St., Toledo, O.

A. J. Nipple & Pipe Cutting Co. (Wrought iron nipples), 203 La Fayette St., New York, N. Y.

A. & J. Mfg. Co., The (Wrought pipe nipples), 559 W. Lake St., Chicago, Ill. (See index to advertisements, pages 7, 8 and 9.)

A. K. Heater Mfg. Co., The (Gas water heaters), 2196 Pitkin Ave., Brooklyn, N. Y.

Abbe Engineering Co. (Coal mach'y, pumps, blowers), 220 Broadway, New York, N. Y.

Abbott Ball Co., The (Burnishing balls), Elmwood Borough, Hartford, Conn.

Abbott, D. S., Co., The (Sawmill mach'y), Olean, N. Y.

Abbott Hardware Co. (Pipe cleaner), 638 Columbus Ave., New York.

Abbott Wire Brush Co. (Flue brushes), 5 Haverhill St., Boston, Mass.

Abendroth Brothers (Boilers, furnaces, stoves, etc.), Port Chester, N. Y.; 359 W. 42nd St., New York, N. Y.

Abendroth, G. Irving, Co. (Exhaust heads, riveted pipe, etc.), 10 E. 43d St., New York, N. Y.

Abendroth & Root Mfg. Co. (Boilers, spiral pipe, steam fittings), Newburgh, N. Y.; 45 Broadway, New York.

Abernathy Vise & Tool Co., The (Vises), 2814 West 26th St., Chicago, Ill.

Abingdon Presurite Mfg. Co. (Pipe joint compounds), Abingdon, Ill.

Abingdon Sanitary Mfg. Co., The (Sanitary earthenware), Abingdon, Ill.

Abingdon Seat & Tank Co. (W. C. tanks and seats), Abingdon, Ill.

Abradent Products Co. (Grinding wheels), 30th and Walnut Sts., Philadelphia, Pa.

Abram Cement Tool Co. (Cement tools), 616 Marquette Bldg., Detroit, Mich.; Windsor, Canada.

Abramsen Engineering Co. (Straightening machines), Union Bank Bldg., Pittsburgh, Pa.

Abrasive Co., The (Grinding wheels), Bridesburg, Philadelphia, Pa.; 566 W. Washington Blvd., Chicago, Ill.

Abrasive Machine Tool Co. (Grinders), East Providence, R. I.

Abrasive Mining & Mfg. Co. (Emery powder), Plymouth, Ind.; 25 Harrison Ave., Springfield, Mass.

Accessible Press Co. (Woodworking mach'y), 5622 Dibble Ave., Cleveland, O.

Acetylene Stove Mfg. Co. (Acetylene stoves), 1232 E. 3d St., Cleveland, Ohio.

Acheson Graphite Co. (Lubricants), Niagara Falls, N. Y.

Acheson Mfg. Co. (Plumbing brass goods), Braddock P. O., Rankin, Pa.  
(See index to advertisement, pages 7, 8 and 9.)

Acheson Oldag Co. (Lubricants), Port Huron, Mich.; 30 E. 42nd St., New York City.

Ackerman-Johnson Co. (Expansion bolts and anchors), 627 W. Jackson Blvd., Chicago, Ill.

Acme Asbestos Covering & Supply Co. (Pipe covering), 214 N. Elizabeth St., Chicago, Ill.

Acme Belting Co. (Canvas, stitched belting), Niles, Mich.; Kansas City, Mo.

Acme Brass Works (Valves and cocks), 8211 Collins & Belt R. R., Detroit, Mich.; 79 W. Monroe St., Chicago; 150 Nassau St., New York; 525 Market St., San Francisco.

Acme Diamond Tool Co. (Emery wheel dressers), 56 Liberty St., New York.

Acme Granolithic Co. (Laundry tubs and sinks), 1194 Tremont St., Boston, Mass.

Acme Level & Mfg. Co. (Levels), Archbold, Ohio.

Acme Machinery Co., The (Bolt and nut mach'y), 4533 St. Clair Ave., N. E., Cleveland, O.

Acme Mfg. Co. (Plumbers' specialties), Bangor, Me.

Acme Mfg. Co., Inc. (Brass chain), 30 Manhan St., Waterbury, Conn.

Acme Radiator Shield Co. (Radiator shields), 159 N. State St., Chicago.

Acme Refining Co., The, (oils, etc.) W. 56th St. and W. & L. E. Ry., Cleveland, O.

Acme Road Machinery Co. (Road mach'y), Frankfort, N. Y.; Boston, Mass.; 120 Liberty St., New York City.; Baltimore, Md.; Cincinnati.

Acme Rubber Mfg. Co., The (Hose, belting, packing), Trenton, N. J.; 1475 S. Michigan ave., Chicago; 30 Church St., New York; 276 Devonshire St., Boston.

Acme Sanitary Pottery Co. (Sanitary earthenware), Trenton, N. J.

Acme Shear Co., The (Tinners' snips), Bridgeport, Conn.

Acme Tool Co. (Drill vises), 143 W. Water St., Milwaukee, Wis.

Acme Truck & Tool Co. (Railroad track tools), Broadway & Branch sts., St. Louis, Mo.

Acme Ventilator Corp. (Ventilators), 399 Atlantic Ave., Boston, Mass.

Acme White Lead & Color Works (Paint and varnish), 8250 St. Aubin, Detroit, Mich.

Acorn Brass Mfg. Co. (Oil pumps), 426 S. Clinton St., Chicago, Ill.

Acton, John (Power plant appliances), 118 John St., Brooklyn, N. Y.

Adams, C. F. (Leather specialties), P. O. Box 253, Fort Worth, Tex.

Adams, E. G. (Laundry trays), Kingston, N. Y.

Adams Co., The (Foundry mach'y, machine tools), Dubuque, Ia.

Adams, W. T., Machine Co. (Engines, boilers, saw-mills), Corinth, Miss.

Adbro Mfg. Co. (Screwdriver), 707 Phipps Power Bldg., Pittsburgh, Pa.

Adjustable Clamp Co. (Woodworkers' clamps), 216 N. Jefferson St., Chicago, Ill.

Adkins, Young & Allen Co. (Pumps, packings, etc.), 561 W. Washington Blvd., Chicago, Ill.

Admiral Welding Machine Co. (Welding equipment), 1608 Locust, Kansas City, Mo.

Adriance Machine Works, Inc. (Punching presses), 80 Richards St., Brooklyn, N. Y.

Advance Car Mover Co. (Car movers or pushers), Appleton, Wis.

Advance Felt & Cutting Co. (Felt specialties), 322 S. Jefferson St., Chicago, Ill.

Advance Hose Mfg. Co., 132 N. 4th St., Philadelphia, Pa.

Advance Leather Machinery Co. (Leather working machinery), 261 Franklin St., Boston, Mass.

Advance Packing & Supply Co. (Gaskets and packings), 64 E. Lake St., Chicago, Ill.

Advance Mfg. Co., The (Gas engines), B and Wayne Sts., Hamilton, O.

Advance Pump & Compressor Co. (Steam pumps), Battle Creek, Mich.; Bourse Bldg., Philadelphia, Detroit, Chicago.

Advance Tool Co. (Reamers, cutters), Canal and Jackson Sts., Cincinnati, O.

Aermotor Co. (Windmills), 2500 W. Roosevelt Road, Chicago, Ill.; Des Moines; Kansas City, Minneapolis, Oakland.

Aero Alarm Co. (Fire alarms), 26 Cortlandt St., New York; Central Bldg., Seattle.

Aero Pulverizer Co., The (Coal pulverizers), 165 Broadway, New York, N. Y.

Aeroll Burner Co., Inc. (Fuel oil burners), 268 Hudson Ave., Union Hill, N. J.

Aero Works, Inc. (Band saws), 86 Warren St., New York.

Aetna Boiler Compound Co. (Boiler compound), 6062 S. La Salle St., Chicago, Ill.

- Agner, Simplex Co. (Wrenches, grease guns and cups), Burlington, Wis.; 115 S. Dearborn St., Chicago.
- Agricola Pipe Co. (Iron plumbing goods), Gadsden, Ala.
- Agrippa Mfg. Corp. (Woven cotton belting), 149 Broadway, New York, N. Y.
- Ahlberg Bearing Co. (Ball bearing), 321 E. 29th St., Chicago, Ill.
- Ainslie Machine & Tool Wks. (Tools and dies), New Park and Jefferson Aves., Hartford, Conn.
- Airdry Corporation (Dryers, electric), Groton, N. Y.; 1216 Westminster Bldg., Chicago; 636 Little Bldg., Boston; 101 W. 43rd St., New York.
- Air Reduction Sales Co. (Oxygen), 342 Madison Ave., New York, N. Y., Atlantic, Boston, Buffalo, Chicago, Cleveland, Detroit, Minneapolis, Philadelphia, Pittsburgh, Richmond, Va., St. Louis, Emeryville, Cal., New York, Oklahoma City, Seattle.
- Air-tight Steel Tank Co. (Steel tanks), Mansion and Gloster Sts., Pittsburgh, Pa.
- Ajax Fire Engine Works (Fire engines), Bush Terminal Bldg., Brooklyn, N. Y.
- Ajax Flexible Coupling Co. (Shaft couplings), Westfield, N. Y.
- Ajax Iron Works (Steam engines), Corry, Pa.
- Ajax Mfg. Co., The (Forging, bending, bolt and nut mach'y), 3830 Lakeside Ave., N.E., Cleveland, O.; 1369 Hudson Terminal Bldg., New York; 621 Marquette Bldg., Chicago.
- Ajax Mfg. Co. (Reamers, saw tools, etc.), 848 Jackson St., Pittsburgh, Pa.
- Ajax Metal Co., The (Metals and castings), 46 Richmond St., Philadelphia, Pa., New York, Boston, Washington, 140 S. Dearborn St., Chicago, St. Louis, San Francisco, Cleveland, Birmingham, Louisville.
- Ajax Tool Co., Inc. (Plumbers' tools), 25 Warren St., New York.
- Akerlund & Semmes, Inc. (Gas producers), 17 Battery Pl., New York.
- Akron Barrow Co. (Wheelbarrows and carts), 3140 E. 65th St., Cleveland, O.; Akron, O.
- Akron Belting Co., The (Belting and hose), Akron, Ohio.
- Akron Gear & Engineering Co. (Clutches, friction), Akron, O.
- Akron Metallic Gasket Co. (Gaskets), 149 N. Union St., Akron, O.
- Akron Rubber Mold & Machine Co. (Tire making equipment), Akron, Ohio.
- Alabama Pipe & Foundry Co. (Soll pipe and fittings), Anniston, Ala.
- Alamo Engine Co., The (Gas engines), Hillsdale, Mich.
- Alamo Farm Light Co. (Electric lighting plants), 6 N. Michigan Ave., Chicago, Ill.
- Alan Wood Iron & Steel Co. (Steel plates and sheets), Widener Bldg., Philadelphia, Pa.; Boston; Ft. Worth; New York; San Francisco.
- Albany Belting & Supply Co. (Leather belting), 373 Broadway, Albany, N. Y.
- Albany Hardware Specialty Mfg. Co. (Drills, hoists, concrete mixers), Albany, Wis.
- Albany Iron Works (Sawmill mach'y, etc.), Albany, Ore.
- Albany Steam Trap Co., The (Power plant appliances), 317-319 Pearl St., Albany, N. Y.
- Albaugh-Dover Co. (Gears), 2100 Marshall Blvd., Chicago, Ill.
- Alberene Stone Co. (Laundry trays, sinks, etc.), 323 E. 23d St., New York, N. Y.; Chicago, Philadelphia, Boston, Pittsburgh, Trenton.
- Alberger Heater Co. (Feed water and tank heaters), Buffalo, N. Y.; 122 S. Michigan Ave., Chicago, Ill.
- Alberger Pump & Condenser Co. (Pumps, condensers, heaters, etc.), 140 Cedar St., New York, N. Y.; 22 W. Monroe St., Chicago; Boston; Philadelphia; St. Louis.
- Albion Mfg. Co. (Asbestos products), 709 1st Ave., Seattle, Wash.
- Albright, Son & Co. (Pipe bends and colls), Allentown, Pa.
- Albuquerque Foundry & Machine Works (Mine cars and mach'y), E. Hazeldine & R. R. Tracks, Albuquerque, N. M.
- Alden Speare's Sons' Co., The (Abrasives), 140-158 Sixth St., Cambridge, 41, Mass.; Chicago; New York.
- Aldon Co., The (Railway track tools), 3338 Ravenswood Ave., Chicago, Ill.
- Aldrich Mfg. Co. (Stamped metal goods), 55-67 Illinois St., Buffalo, N. Y.
- Aldrich Pump Co., The (pumps and hydraulic mach'y), Allentown, Pa.; 1936 McCormick Bldg., Chicago; 1314 Keenan Bldg., Pittsburgh, Pa.
- Aldrich, William K., Co. (Hand screws, etc.), 4 Grove St., Lowell, Mass.
- Alert Tool Co. (Wrenches, scrapers, etc.), 237-241 N. 6th St., Philadelphia, Pa.
- ♦ Alexander Bros. (Leather belting), 406-420 N. 3d St., Philadelphia; 2315 Singer Bldg., New York; 19 Garnett St., Atlanta, Ga.; 127 Broad St., Boston, Mass.; 9 So. Clinton St., Chicago, Ill.
- 844 Sixth St. W., Cincinnati, Ohio; 24 Noble Court, Cleveland, Ohio; 525 Woodward Ave., Detroit, Mich.; 49 Middletown Ave., New Haven, Conn.; 422 First Ave., Pittsburgh, Pa.
- Alexander, Car Replacer Mfg. Co., The (Car replacers), Scranton, Pa.
- Alexander, D. A., Co. (Concrete anchors), 272 State St., Rochester, N. Y.
- All Wear Glove Co. (Mechanics gloves), Fairport, N. Y.
- Allan, A., & Son (Bearing metals), Harrison, N. J.
- Allbestos Corp. (Asbestos textiles), Belfield Ave. & Fisher's Lane, Philadelphia, Pa.
- Allegheny Steel Co. (Iron and steel products), Oliver Bldg., Pittsburgh, Pa.; 1100 3d Nat'l Bank Bldg., St. Louis; 90 West St., New York; 122 S. Michigan Ave., Chicago, Ill.
- Allen, Chas. G., Co. (Machine tools), Barre, Mass.
- Allen, Charles (Wooden handles), Terryville, Conn.
- Allen Corporation, The (Fire extinguishers), 546 Greenwich St., New York.
- Allen Engineering Co., (Derricks), 14 N. 55th St., Philadelphia, Pa.
- Allen Filter Co., The (Water filters and coolers), 25 S. St. Clair St., Toledo, O.
- Allen Fire Dept. Supply Co., The (Fire protection supplies), Eddy and Friendship Sts., Providence, R. I.; 43 Murray St., New York, N. Y.
- Allen, John F., Co. (Pneumatic riveters), 370 Gerard Ave., New York, N. Y.
- Allen, L. B., Co., Inc. (Solder), 4560 N. Lincoln St., Chicago, Ill.; Salt Lake City; Seattle; San Francisco; Winnipeg.
- Allen Machine Co. (Drilling and tapping mach'y), 1585 Columbus Rd., N.W., Cleveland, O.
- Allen Mfg. Co., Inc., The (Set screws), 135 Sheldon St., Hartford, Conn.
- Allen Packing Co. (Packings), Collingswood, N. J.
- Allen Pressure System Co., Inc., 16-24 W. 61st St., New York, N. Y.
- Allen & Curtiss Co., 415-417 S. Main St., Mishawaka, Ind.
- Allen Wm., Sons Co. (Boilers and tanks), 65 Green St., Worcester, Mass.
- Allen Wrench & Tool Co. (Wrenches and drills), 189 Public St., Providence, R. I.
- Allen W. P. Mfg. Co. (Steam and water brass goods), 566 W. Lake St., Chicago, Ill.; 69 Warren St., New York.
- Allen Cliff Engineering Co. (Centrifugal pumps), Columbus, O.
- Allentown Experimental Works (Traps, separators, steam), 3rd and Union Ave., Allentown, Pa.
- Alliance Vitreous China Co., The (China bathroom accessories), Alliance, O.
- Allied Belting Co., (Canvas belting), Greenville, O.
- Allington & Curtis Mfg. Co., The (Blowers, fans, etc.), 400 Holden St., Saginaw, Mich.; 14 L St., Boston; 565 W. Wash. Blvd., Chicago.
- Allis-Chalmers Mfg. Co. (Steam and elec'l mach'y), Milwaukee, Wis.; Atlanta, Ga.; Boston; Chicago; Cincinnati; Cleveland; Dallas; Denver; Detroit; El Paso; Kansas City; Minneapolis; New Orleans; 50 Church St., New York City; Philadelphia; Pittsburgh; St. Louis; Salt Lake; San Francisco; Seattle; Birmingham; Buffalo; Los Angeles; Portland, Ore.; Toledo; Duluth; Wilkesbarre, Pa.; Charlotte, N. C.
- Allith-Prouty Co. (Hardware specialties), Danville, Ill.; 20 E. Lake St., Chicago; 136 Pearl St., Boston; 32 Howard St., New York; 521 Commerce St., Philadelphia; Phelan Bldg., San Francisco.
- Allman Gas Engine & Machine Co., The (Gas engines), 461 Canal St., New York, N. Y.
- Allright Mfg. Co. (Closet seats), Greensboro, N. C.
- Almirell & Co., Inc. (Heating systems), 1 Dominick St., New York; 1208 Monadnock Bldg., Chicago, Ill.
- Almond Co., T. R., (Countershafts, flexible tubing), Ashburnham, Mass.
- Almy Water-tube Boiler Co. (Boilers), 184 Allen Ave., Providence, R. I.
- Alpha Slate Mfg. Co. (Sinks, laundry trays, stalls), 29 Broadway, Bangor, Pa.
- Alsing, J. R., Engineering Co. (Pulverizing mach'y), 50 Church St., New York, N. Y.
- Alsteel Mfg. Co. (Baling presses), Battle Creek, Mich.
- Alston Saw & Steel Co., Inc. (Hack saw blades), Folcroft, Pa.; 114 Liberty St., New York, N. Y.
- Alumalux Co. (Solder), Sidney, O.
- Aluminum Brazing Solder Co. (Aluminum solder), Montgomery Bldg., Chester, Pa.
- Aluminum Co. of America (Sheet, tubing, wire), 2403 Oliver Bldg., Pittsburgh, Pa.; Westminster Bldg., Chicago; Garfield Bldg., Cleveland.
- Alvey Mfg. Co. (Conveying mach'y), St. Louis Mo.; Boston; New York; Philadelphia; San Francisco; Chicago; Cleveland; Atlanta; Buffalo.
- ♦ Alvord Reamer & Tool Co. (Reamers), Millersburg, Pa.; New York, Philadelphia, Pittsburgh, Chicago, San Francisco; Louisville; Detroit.
- Amalgamated Machinery Corp. (Ammunition mach'y), 215 N. Mich. Ave., Chicago, Ill.
- American Abrasive Metals Co. (Stair treads), 50 Church St., New York, N. Y.
- American Agramid Corp. (Beit dressing), Flushing, N. Y.; 220 West 42nd St., New York.

- American Air Compressor Works** (Pumps and compressors), 26 Cortlandt St., New York, N. Y.
- American Asbestos Co.**, Norristown, Pa.
- American Atmos Corp.** (Mine rescue equipment), Wilkensburg Sta., Pittsburgh, Pa.; 105 W. 40th St., New York City.
- American Axe & Tool Co.** (Axes, hatchets, etc.), Glassport, Pa.
- American Ball Co.** (Steel balls), 115 Clifford St., Providence, R. I.
- American Ball Valve & Mfg. Co.** (Valves), 1725 Hastings St., Detroit, Mich.
- American Belting Companies, The** (Canvas belting), Texas, Md.
- American—Blakeslee Mfg. Co.** (Gas engines), 54th St. and 1st Ave., Birmingham, Ala.
- American Blower Co.** (Blowers, engines, etc.), 6004 Russell St., Detroit, Mich.; R. A. Lang Bldg., Kansas City; 654 Lemcke Annex, Indianapolis; 120 Milk St., Boston; Huntington Bldg., Columbus; 209 Houseman Bldg., Grand Rapids; 801 Sweetland Bldg., Cleveland; 141 Broadway, New York; Marquette Bldg., Chicago; Hale Bldg., Philadelphia; Empire Bldg., Pittsburgh; Title Guaranty Bldg., St. Louis; Empire Bldg., Atlanta; Plymouth Bldg., Minneapolis; 667 Mission St., San Francisco; 921 Hollingsworth Bldg., Los Angeles; 538 Central Bldg., Seattle; 816 Realty Bldg., Charlotte, N. C.; Denver, Colo.; 309 Citizens Nat'l Bank Bldg., Des Moines, Ia.; 123 San Francisco St., El Paso, Tex.; 917 Hennen Bldg., New Orleans, La.; Insurance Bldg., Rochester, N. Y.; Judge Bldg., Salt Lake City, Utah.
- American Boiler Compound Co.** (Boiler compounds), 30 N. Dearborn St., Chicago, Ill.
- American Boiler Life Co.** (Boiler compound), 19 N. Market St., Boston, Mass.
- ♦ **American Bolt Co.** (Bolts, nuts, washers), Birmingham, Ala.
- American Bolt & Screw Case Co.** (Cases for bolts, etc.), Dayton, O.
- American Brake Lining Co.** (Brake lining, etc.), Lansdale, Pa.; 1344 S. Flower St., Los Angeles, Calif.
- American Brass & Copper Co., The** (Brass and copper sheets, tubes, etc.), 138 Lafayette St., New York, N. Y.
- American Brass Co., The** (Tubing, sheets, rods), 414 Meadow St., Waterbury, Conn.
- American Brass Mfg. Co.** (Plumbing brass goods), 1525 E. 149th St., Cleveland, O.
- American Brass Novelty Co.** (Plumbing brass goods), Grand Haven, Mich.
- American & British Mfg. Co.** (Steam engines), Bridgeport, Conn.; Providence, R. I.
- American Bronze Co.** (Bushings), Berwin, Pa.; 340 Leader-News Bldg., Cleveland, O.; Chicago, Boston.
- American Carbolite Co.** (Carbide), Duluth, Minn.
- American Carbon & Battery Works** (Brushes and batteries), East St. Louis, Ill.
- American Cast Iron Pipe Co.** (Iron pipe), Birmingham, Ala.; 718 Scarritt Bldg., Kansas City; 1 Broadway, New York; 416 Praetorian Bldg., Dallas; 461 Market St., San Francisco.
- American Castings & Mfg. Corp.** (Expansion bolts, etc.), 30 Main St., Brooklyn, N. Y.
- American Cement Machine Co., Inc.** (Concrete mixers), Keokuk, Ia.; New York, Cambridge, Richmond, Pittsburgh, Atlanta, Indianapolis, Louisville, St. Louis, New Orleans, Denver, Spokane, Minneapolis.
- ♦ **American Chain Co., Inc.** (Chains), Bridgeport, Conn.; Boston; Chicago; New York; Philadelphia; Pittsburgh; Portland; San Francisco.
- American Chemical Co.** (Fire extinguishers), Lebanon, Pa.
- American Clothes Dryer Co.** (Laundry dryers), 224 W. 26th, New York, N. Y.
- American Compressor & Pump Co.** (Air compressors), 801 Pratt St., Baltimore, Md.
- American Copper & Brass Works** (Water stills), 612-618 E. Front St., Cincinnati, O.
- American Compound Co.** (Case hardening compound), 151 Franklin St., Boston, Mass.
- American Crucible Products Co.** (Babbitt metal, etc.), Elyria, O.
- American Crude Oil Burner Co.** (Oil burners), 7th and Harrison Sts., San Francisco, Cal.
- American Die & Tool Co.** (Punches and reamers), Reading, Pa.
- American District Steam Co.** (Steam heating supplies), North Tonawanda, N. Y.; Chicago, New York, Seattle.
- American Electric Tool Co.** (Drills and grinders), West Newton, Mass.
- American Electrical Heater Co.** (Heating and cooking devices), 6125 Woodward Ave., Detroit, Mich.
- American Emery Wheel Co.** (Grinding wheels), Waterman St., Providence, R. I.
- American Enameled Products Co.** (Bathroom fittings), 2126 Prairie Ave., Chicago, Ill.
- American Enameling Mfg. Corp.** (Enamelled plumbing fixtures), Elizabeth, N. J.
- American Engine Co.** (Gas engines), 6210 2nd St., Detroit, Mich.
- American Engine & Boiler Works** (Baling presses), Tonawanda, N. Y.
- American Engineering Co.** (Mechanical stokers), Aramingo and Cumberland Sts., Philadelphia, Pa.
- ♦ **American Equipment Co.** (Bolts, screws, nuts), Norristown, Pa.
- American Filter Co.** (Water filters), 655 Buffum St., Milwaukee, Wis.
- American Fire Apparatus Co.** (Fire appliances), 30 E. 42d St., New York, N. Y.
- American Flexible Bolt Co.** (Bolts, boiler stays), Union Bank Bldg., Pittsburgh, Pa.
- American Fork & Hoe Co.** (Forks and hoes), Sweetland Bldg., Cleveland, O.
- American Foundry & Construction Co.**, 2d Ave. and Lugworth St., Pittsburgh, Pa.
- American Foundry Equipment Co.** (Foundry equipment), 366 Madison Ave., New York City; 2935 W. 47th St., Chicago.
- American Foundry & Mfg. Co.** (Steam, gas and water supplies), 10th, 11th, Herbert and Wright Sts., St. Louis, Mo.
- (See index to advertisement, pages 7, 8 and 9.)
- American Foundry & Pipe Co.** (Soil pipe and fittings), Penn Station, Pa.
- American Gage Co.** (Limit gages), Newark, N. J.
- American Galco Co.** (Oil cups), Grand Central Palace, New York.
- American Gas Furnace Co.** (Gas furnaces, etc.), Elizabeth, N. J.
- American Gas Machine Co.** (Gas lighting apparatus), Albert Lea, Minn.; 78 Reade St., New York, N. Y.
- American Grinder Mfg. Co.** (Tool grinders), Milwaukee, Wis.
- American Gut String Mfg. Co.** (Lacing belt leather), 5415 S. Ashland Ave., Chicago, Ill.
- American Heater Corp.** (Water heaters), St. Louis, Mo.
- American Highspeed Chain Co.** (Transmission chain), Indianapolis, Ind.; 30 Church St., New York; The Bourse, Philadelphia; 1406 S. Michigan Ave., Chicago.
- American Hoist & Derrick Co.** (Hoisting and logging apparatus), 63 S. Robert St., St. Paul, Minn.; Chicago; Detroit, New York; New Orleans; Pittsburgh; Seattle.
- American Incandescent Heat Company, Inc.** (Heat treating furnaces), 10 Post Office Sq., Boston, Mass.
- ♦ **American Injector Co.** (Steam specialties), 172 14th St., Detroit, Mich.
- (See index to advertisement, pages 7, 8 and 9.)
- American Iron Products, Inc., The** (Iron plumbing goods), 107 Liberty St., New York, N. Y.
- American Iron & Wire Works** (Metal lockers), 1632-28 Carroll Ave., Chicago, Ill.
- American Kron Scale Co.** (Scales), 430 E. 53d St., New York, N. Y.; Baltimore, Boston, Chicago, Cleveland, Louisville, Ky., Detroit, Minneapolis, Philadelphia, Pittsburgh, Providence, San Francisco, Wilson, N. C.
- ♦ **American Lace Leather Co., Inc.** (Belt lacing), Virginia and Canal Sts., Richmond, Va.
- American La France Fire Engine Co.** (Fire engines and extinguishers), Elmira, N. Y.; Boston; Chicago; Dallas; Los Angeles; New York; Pittsburgh; San Francisco.
- American Laminated Belting Co.** (Leather belting), 30 Church St., New York.
- American Laundry Machinery Co.** Specialty Dept. (Wiper reclaiming machines), Norwood, Cincinnati, O.; New York; St. Louis; Dallas; Los Angeles; Seattle; Chicago; Boston; Philadelphia; Kansas City; San Francisco.
- American Lava Corporation** (Gas burners), 1419 William St., Chattanooga, Tenn.
- American Lead Co.** (Lead pipe, etc.), 3112-14 Penn Ave., Pittsburgh, Pa.
- American Logging Tool Co.** (Logging tools), Ewart, Mich.
- American Lubricator Co.** (Engineers' supplies), Summit and Wabash R.R., Detroit, Mich.
- American Machine Products Co.** (Drills, reamers, etc.), 18th & Howard Sts., Detroit, Mich.
- American Machine Tool Engineering Works** (Lathes), 4854 W. Kinzie St., Chicago, Ill.
- American Mfg. Co.** (The Rope and twine), Noble and West Sts., Brooklyn, N. Y.; Boston; Philadelphia; St. Louis.
- American Metal Hose Co.** (The Metallic hose), Waterbury, Conn.; 173 Lafayette St., New York; 29 E. Madison St., Heyworth Bldg., Chicago; 84 Battery March St., Boston, Mass.
- American Metallic Packing Co.** (Packings), North side, Pittsburgh, Pa.; 411 Lincoln Road, Brooklyn, N. Y.
- American Mfg. Co.** (Castings, floats), Dayton, Ohio.
- American Metal Products Co.** ("Ampeco" bronze), Clinton St. and Kinnickinnic Ave., Milwaukee, Wis.
- American Meter Co.** (Gas meters), 122 S. Michigan Ave., Peoples Gas Bldg., Chicago, Ill.; 11th Ave. and 47th St., New York; Arch and 23d St., Philadelphia.
- American Milling Machine Co.** (Milling machines), Richmond St. and McLean Ave., Cincinnati, Ohio.

- American Mills Co. (Twines), 172-78 Marietta St., Atlanta, Ga.; New York, Chicago.
- American Mining Tool Co. (Mining tools), Ottumwa, Ia.
- American Moistening Co. (Humidifiers), 120 Franklin St., Boston, Mass.
- American Molding Machine Co., (Foundry machinery), Terre Haute, Ind.
- American No-Slip Cement Co. (Pulley covering), Medford, Mass.
- American Numbering Machine Co. (Numbering machines), Shepard Ave., Cor. Atlantic Ave., Brooklyn, N. Y.; 123 Madison St., Chicago.
- American Nut & Bolt Fastener Co. (Locknuts and washers), Pittsburgh, Pa.; Atlanta, Chicago, Detroit, New York, San Francisco.
- American Oil Corp. (Oils, greases), Jackson, Mich.; 3000 Military Ave., Detroit, Mich.; 11 Broadway, N. Y.
- American Oil Products Co. (Lubricants), Buffalo, N. Y.
- American Oil Pump & Tank Co., The (Oil tanks and pumps), Finlay and Dalton St., Cincinnati, O.; 1418 Race St., Philadelphia; 1770 Broadway, New York; 1110 American Bldg., Baltimore, Md.; 1824 Grand Ave., Kansas City, Mo.; 704 N. Broadway, Vicksburg.
- American Oil Refining Co. (Boiler compound), 1866 Milwaukee Ave., Chicago, Ill.
- American Oil Refining Co. (Compound, boiler), 1866 Milwaukee Ave., Chicago, Ill.
- American Pin Co. (Plumbers' brass goods), Waterbury, Conn.; 507 Fifth Ave., New York; 209 S. State St., Chicago; North American Bldg., Philadelphia. (See index to advertisement, pages 7, 8 and 9.)
- American Pipe Bending Machine Co. (Pipe benders), 27-29 Pearl St., Boston, Mass.
- American Pipe & Construction Co. (Hydraulic pipe), 112 N. Broad St., Philadelphia, Pa.
- American Pipe & Flange Co. (Steel pipe), 95 Liberty St., New York.
- American Power Co. (Fuel economizers), 25 West 45th St., New York, N. Y.
- ◆ American Pulley Co., The (Steel pulleys), 4200 Wisconsin Ave., Philadelphia, Pa.; 114 S. Clinton St., Chicago; 33-35 Greene St., New York; 165 Pearl St., Boston; 536 First Ave., S. Seattle.
- American Pulverizer Co. (Crushing machines), 18th and Austin Sts., St. Louis, Mo.
- American Pump & Tank Co. (Oil pumps, tanks, etc.), 302 W. 58th St., New York, N. Y.
- American Radiator Co. (Heating apparatus), Buffalo, N. Y.; Chicago; New York; Boston; Pittsburgh; Cincinnati; Washington; Atlanta; Birmingham; New Orleans; Detroit; Cleveland; Milwaukee; Indianapolis; St. Louis; Minneapolis; St. Paul; Omaha; Kansas City; Denver; San Francisco; Seattle; Spokane; Portland; Baltimore; Worcester; Newark; Wilkes-Barre; Harrisburg; Richmond; Rochester; Grand Rapids; Des Moines; Los Angeles; Spokane; Toronto.
- American Ring Co. (Bathroom fittings), Waterbury, Conn.; 2 Hudson St., New York; 507 Heyworth Bldg., Chicago; 170 Summer St., Boston; 263 Market St., San Francisco.
- American Rotary Pump Co. (Rotary pumps), 67 Hampden St., Boston, Mass.
- American Roller Bearing Co. (Roller bearings), 416-420 Melwood Ave., Pittsburgh, Pa.; Cleveland.
- American Rolling Mill Co., The (Iron and steel plates), Middletown, O.; New York; 122 S. Michigan Ave., Chicago, St. Louis, Detroit, Pittsburgh, Cincinnati, Cleveland, San Francisco, Buffalo; New Orleans, Philadelphia, Toronto.
- American Rust Proof Co. (Rust preventive), 45 W. 38th St., New York, N. Y.
- American Safety Lamp & Mine Supply Co. (Mine lamps, signals, etc.), Scranton, Pa.
- American Sanitary Mfg. Co. (Plumbing brass goods), Abingdon, Ill.
- American Sanitary Sewage Co. (Septic tanks), Bank of Commerce Bldg., Memphis, Tenn.
- American Saw Filing Machine Co. (Saw mach'y), 36 Wash St. North, Boston 14, Mass.
- American Saw Mill Machinery Co. (Sawmill mach'y), Main St., Hackettstown, N. J.; 50 Church St., New York; 314 Williamson St., Savannah, Ga.; New Orleans; Bourse Bldg., Philadelphia, Pa.
- American Saw & Mfg. Co. (Band saws), Springfield, Mass.
- American Saw & Tool Works (Saws, etc.), 2431 W. 14th St., Chicago, Ill.
- American Scale Co. (Scales and farm tools), 1511 Cypress St., Kansas City, Mo.
- ◆ American Screw Co. (Bolts, rivets, screws), 21 Stevens St., Providence, R. I.; 225 W. Randolph St., Chicago.
- ◆ American Sheet & Tin Plate Co. (Sheets, roofing, etc.), Frick Bldg., Pittsburgh, Pa.; 208 S. LaSalle St., Chicago; Cincinnati; Denver; Detroit; New Orleans; 80 Church St., New York; Philadelphia; St. Louis.
- American Shaper & Transmission Appliance Co. (Clutches and shapers), 1148 Holton St., Milwaukee, Wis.
- American Smelters Securities Co. (Lead pipe, etc.), Merchants' Exchange Bldg., San Francisco, Cal.; 84 Columbia St., Seattle; 1811 E. 7th St., Los Angeles, Calif.
- American Smelting & Refining Co. (Metals), 120 Broadway, New York, N. Y.; 9435 Kreiter Ave., Chicago; 9th St. and Freeman Ave., Cincinnati.
- American Solder & Flux Co. (Blow torches and solder), 2910 N. 16th St., Philadelphia, Pa.
- American Specialty Co. (Drills and sockets), 323 W. Ohio St., Chicago.
- American Spiral Pipe Works (Spiral pipe and fittings), W. 14th and S. 48th Ave., Chicago, Ill.; 50 Church St., New York.
- American Spring Force Cup Mfg. Co., (Plumbers force cups), 227 W. Madison St., Chicago, Ill.
- American Stamping Co. (Oil cups), Battle Creek, Mich.
- American Standard Tourniquet Co., (First Aid Equipment), Portland, Me.
- American Steam Conveyor Corp. (Coal & ash carrier), 326 W. Madison St., Chicago.
- ◆ American Steam Gauge & Valve Mfg. Co. (Gauges, valves, etc.), 208 Camden St., Boston, Mass.; Atlanta, Boston, Chicago, New York, Los Angeles, Pittsburgh.
- American Steam Packing Co. (Packings), 191 High St., Boston, Mass.; 1 Hudson St., New York.
- ◆ American Steam Pump Co. (Pumps), Battle Creek, Mich.; 17 Battery Pl., New York; 1220 Monadnock Blk., Chicago; 2211 Olive St., St. Louis; 58 Pearl St., Boston; 620 Industrial Trust Bldg., Providence; 117 New Montgomery St., San Francisco; 926 Citizens Bldg., Cleveland; 182 Meeting St., Charleston, S. C.; 420 Canal St., New Orleans; 301 State St., Rochester, N. Y.; 51 Commercial Pl., Norfolk, Va.; Dravo-Doyle Co., Diamond Bank Bldg., Pittsburgh; 2123 Dime Bank Bldg., Detroit; 717 Finance Bldg., Kansas City; 704 Baker-Detwiler Bldg., Los Angeles; Commercial Trust Bldg., Philadelphia; 705 Holston National Bank Bldg., Knoxville, Tenn.; 1621 17th St., Denver; 136 Huron St., Toledo; 110-114 Coosa St., Montgomery, Ala.; 1006-10 Douglas St., Omaha; Southwestern Life Bldg., Dallas; 223 S. Front St., Memphis; 756 Washington St., Buffalo; Railroad Ave. and Wall St., Spokane; 808 Merchants Bank Bldg., Indianapolis; 7-9 S. Broad St., Atlanta; 1716 American Trust Bldg., Birmingham; 701 E. Commerce St., San Antonio; 418 American Nat'l Bank Bldg., Richmond; 808 Northern Bank Bldg., Seattle; 129-137 N. 3d St., Nashville; Second and Ash Sts., Portland, Ore.; 764 Main St., Winneipeg; 705 Ouray Bldg., Washington, D. C.; 64 Front St., W. Toronto; Shaw and Rosella Sts., Cincinnati. (See index to advertisement, pages 7, 8 and 9.)
- American Steel Co., (Cotter pins), Park Bldg., Pittsburgh, Pa.
- American Steel Scraper & Wheelbarrow Co. (Wheelbarrows), Sidney, O.
- American Steel Tube Co., The (Steel tubing), Buckeye St. and T. T. R. R., Toledo, Ohio.
- American Steel & Tube Co. (Pipe and fittings), Lorain, O.
- ◆ American Steel & Wire Co. (Steel and wire products), 208 S. LaSalle St., Chicago, Ill.; Boston, New York, Buffalo, Cincinnati, Detroit, Philadelphia, Pittsburgh, Worcester.
- American Steel Wool Mfg. Co. (Steel wool), 9-13 Desbrosses St., New York, N. Y.
- American Sterilizer Co. (Water filters), Erie, Pa.; 737 W. Madison St., Chicago; 200 Fifth Ave., New York.
- American Supply Co. (Machine wiping cloths), 1415 Dayton St., Chicago, Ill.
- ◆ American Swiss File & Tool Co. (Files), 24-26 John St., New York, N. Y.
- American Tank & Pump Co. (Gasoline pumps), 950 Mission St., San Francisco, Cal.
- American Tap & Die Co. (Taps, dies, etc.), Greenfield, Mass.; Chicago, New York, Philadelphia, San Francisco.
- American Thermostat Co., The (Heat regulators), 226 Jelliff Ave., Newark, N. J.; Herald Square Bldg., New York.
- American Thermo-Ware Co. (Eye protectors), 16 Warren St., New York, N. Y.
- American Thread Grinding Machine Co. (Thread grinders), 151 East 126th St., New York.
- American Tin & Terne Plate Co. (Plates and roofing), 24th and Vine Sts., Philadelphia, Pa.
- American Tool & Machine Co. (Transmission mach'y, machine tools, etc.), 10 High St., Boston, Mass.; 174 Fulton St., New York. (See index to advertisements, pages 7, 8 and 9.)
- American Tool & Machine Co. (Stocks and dies), Baltimore, Md.; Wilson Bldg., New York; 112 N. LaSalle St., Chicago.

- American Tool Works Co.**, The (Metal working mach'y), Pearl St. and Eggleston Ave., Cincinnati, O.
- American Tower & Tank Co.** (Towers and tanks), Elgin, Ill.
- American Tripoli Co.** (Filtering stones), Seneca, Mo.
- American Tube Co.** (Steel tubing), 37th and Rockwell Sts., Chicago, Ill.
- American Tube Works** (Brass and copper tubing), 10 Oliver St., Boston, Mass.; 501 5th Ave., New York; 14 E. Jackson Blvd., Chicago; 543 Bourse, Philadelphia.
- American Tube & Stamping Co.** (Stamped and drawn work), 471 Hancock Ave., Bridgeport, Conn.; 120 Broadway, New York.
- American Twist Drill Co.** (Twist drills), Detroit, Mich.
- American Valve Co.** (Valves), Mansion St., Cox-sackie, N. Y.
- American Valve & Meter Co.** (Engineers' specialties), 2833-49 Spring Grove Ave., Cincinnati, O.
- American Vitriol Products Co.**, Akron, O.; New York, Boston, Pittsburgh, Columbus, Jackson, Mich.; Philadelphia, Cleveland, Detroit, Mich.
- American Vulcanized Fibre Co.** (Fibre products), Wilmington, Del.; 12 Pearl St., Boston.
- American Warming & Ventilating Co.** (Heating and sanitary appliances), 317-319 Penn Ave., Elmira, N. Y.
- American Washer Works** (Washers), 426 Smith St., Brooklyn, N. Y.
- American Water Heater Co.** (Water heaters), Sixth and Carr Sts., St. Louis, Mo.
- American Water Softener Co.** (Water softeners) S. E. Corner 4th and Lehigh Ave., Philadelphia, Pa.
- American Well & Prospecting Co.** (Pumping and drilling mach'y), 301 N. 7th St., Corsicana, Tex.; El Dorado, Ark.; Houston, Tex.; Los Angeles, Calif.; Tampico, Mexico.
- American Well Works**, The (Pumping and drilling mach'y), Aurora, Ill.; 38 S. Dearborn St., Chicago.
- American Woodworking Machinery Co.** (Woodworking mach'y), Rochester, N. Y.; 30 E. 42d St., New York; Canal-Louisiana Bank Bldg., New Orleans; White Bldg., Seattle; Ranese Bldg., Spokane; 1st and Pine Sts., Portland, Ore.; 58 Tremont St., San Francisco; 565 W. Washington, Chicago.
- American Zinc, Lead & Smelting Co.** (Metals), 55 Congress St., Boston, Mass.; Chicago; Columbus, O.; Carterville, Me.; Joplin, Mo.; Knoxville, Tenn.; Mawcot, Tenn.; Plattenville, Wis.; New York; St. Louis.
- American Zinc Products Co.**, The (Zinc), Greencastle, Ind.
- Ames, B. C., Co.** (Metal working mach'y), Waltham, Mass.
- Ames Iron Works** (Steam engines, etc.), Oswego, N. Y.; 85 Liberty St., New York; 24 Milk St., Boston; 343 S. Dearborn St., Chicago; 820 Arcade Bldg., Philadelphia; 218 Bastable Bldg., Syracuse; 622 Ellicott Square Bldg., Buffalo; Electrical Bldg., Baltimore.
- Ames Mfg. Co.** (Pneumatic tanks), 128 N. Wells St., Chicago.
- Ames Shovel & Tool Co.** (Shovels, scoops and spades), Ames Bldg., Boston, Mass.
- Ames Sword Co.** (Polishing belts), Chicopee, Mass.
- Ames, W., & Co.** (Spikes, bolts, etc.), Jersey City, N. J.
- Ames, Max, Machine Co.**, The (Sheet metal working mach'y), 101 Park Ave., New York.
- Amsler, Walter O.** (Gas producers and furnaces), Wabash Bldg., Pittsburgh, Pa.
- Anchor Bolt & Nut Co.** (Bolts and nuts), Poughkeepsie, N. Y.
- Anchor Core Economy Soap Co.** (Soap), 136 W. Lake St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Anchor Packing Co.**, The (Packings), 35 N. 7th St., Philadelphia, Pa.; 91 Maiden Lane, New York; 190 N. State St., Chicago; Philadelphia; Boston; Cleveland; Baltimore; Pittsburgh; San Francisco; Detroit; Cincinnati; New Orleans; Minneapolis; Seattle; Rochester; Denver; Omaha; Salt Lake City; Birmingham.
- Anchor Stone Co.** (Laundry trays), 2937 Lyndale Ave., S. Minneapolis, Minn.
- Anderson Bros. Mfg. Co.** (Balancing ways), 1915 Kishwaukee St., Rockford, Ill.
- Anderson Die Machine Co.** (Die sinkers), Bridgeport, Conn.
- Anderson Electric & Equipment Co.** (Electric lamps), 154-160 Whiting St., Chicago.
- Anderson Engine Co.** (Gas engines), 4036 N. Rockwell St., Chicago, Ill.; 416 Broome St., New York.
- Anderson Engineering & Supply Co.** (Range boiler heaters), Peekskill, N. Y.
- Anderson Foundry & Machine Co.**, Anderson, Ind.; Crowley, La.; Donaldsonville, La.; New York; Stuttgart, Ark.
- Anderson, Geo., & Co., Ltd.** (Stone working mach'y), 420 Ogden St., Newark, N. J.
- Anderson Mfg. Co.**, The (Fuel economizers), 1922 Arch St., Philadelphia, Pa.
- Anderson, V. D., Co.**, The (Steam traps and plantation mach'y), W. 96th St. and Nickel Plate R.R., Cleveland, O.; 100 Pearl St., Boston, Union Trust Bldg., Baltimore; 431 S. Dearborn St., Chicago; 366 3rd Ave., New York; 537 Race St., Philadelphia.
- Anderson, W. H., Tool & Supply Co.** (Small tools), 1230 Brush St., Detroit, Mich.; 303 Bridge St. N. W., Grand Rapids, Mich. (See index to advertisements, pages 7, 8 and 9.)
- Anderson Wrench Co.** (Wrenches), Portland, Conn.
- Andrew, M. L., & Co.** (Woodworking mach'y), Colerain Ave. and Alabama St., Camp Washington, Cincinnati, Ohio.
- Andrew Motor Mfg. Co.** (Gas engines), Milwaukee, Wis.
- Andrews, Thos. G. & Co.** (Laundry tray wastes), 30-32 Wendell St., Boston, Mass.
- Andrews Heating Co.** (Heating and sanitary apparatus), 2529 University Ave., S.E., Minneapolis.
- Angle Steel Stool Co., Inc.** (Stools factory), Otsego, Mich.; 9 South Clinton St., Chicago.
- Angell Belt Hook Co.** (Belt hooks), Providence, R. I.
- Anglo-American Mill Co.**, The (Flour mill), Owensboro, Ky.
- Angster & Lynch** (Plumbing brass goods), Newark, N. J.
- Ankya Mfg. Co.** (Expansion bolts), Wayne Junction, Philadelphia, Pa.
- Anniston Foundry Co.** (Cast iron pipe), Anniston, Ala.
- Anniston Soil Pipe Co.** (Soil pipe), Anniston, Ala.
- Ansonia Clock Co.** (Clocks), 99 John St., New York, N. Y.; 215 W. Randolph St., Chicago.
- Ansonia Mfg. Co.** (Brass screws, nuts, etc.), Ansonia, Conn.; 1819 Broadway, New York.
- Ansonia Novelty Co.**, The (Oilers), 285 Main St., Ansonia, Conn.
- Ansonia Sanitary Mfg. Co.** (Garbage burners, ejectors, etc.), 5 Horatio St., New York, N. Y.
- Anthes Force Oil Co.** (Oilers) Fort Madison, Ia.
- Anthony Co.**, The (Fuel oil burners), 138 West Ave., Long Island City, N. Y.
- Anti-Borax Compound Co.**, The (Welding compounds), 1502 Wall St., Fort Wayne, Ind.
- Antiseptol Liquid Soap Co.** (Liquid soap and dispensers), 564 W. Randolph St., Chicago, Ill.; 132 Nassau St., New York.
- Anton, Geo., & Bro.** (Miners' lamps), Monongahela, Pa.
- Apex Drill Co.**, The (Countersink drills), 2455 West McMicken Ave., Cincinnati, Ohio.
- Apex Sanitary Specialty Co.** (Closet bowls), 210 American Mechanic Bldg., Trenton, N. J.
- Apex Steel Corp.** (Welding), 60 Church St., New York.
- Apex Supply Co.**, (Closet bowls), Trenton, N. J.
- ♦ **Appleton Car Mover Co.** (Car movers), 547 Eldorado St., Appleton, Wis.; Woodstock, Can.
- Appleton Co.** (Cordwood outfits), Batavia, Ill.
- Appleton Mfg. Co.** (Windmills), Batavia, Ill.; Kansas City; Minneapolis; Council Bluffs, Ia.
- A. P. W. Paper Co.**, The (Toilet paper holders), Albany, N. Y.; Atlanta, Chicago; Dallas; New York; Philadelphia; San Francisco; St. Louis.
- Aqua Electric Heater Co.** (Electric water heaters), 250 W. 54th St., New York.
- Arc Welding Machine Co.**, Inc. (Welding tools), 220 W. 42d St., New York, N. Y.
- Arcadia Trailer Corp.**, Newark, N. Y.
- Archer Iron Works** (Industrial cars), 2436 W. 34th St., Chicago, Ill.
- Arctic Ice Machine Co.**, The (Ice mach'y), Canton, O.; Cincinnati; Pittsburgh; New Orleans; Kansas City; Los Angeles; Denver; Butte; Huntington, W. Va.
- Arex Co.** (Ventilators), 111 W. Washington St., Chicago.
- Argus Asbestos Co.** (Asbestos products), Port Chester, N. Y.
- Arguto Oilless Bearing Co.** (Bearings), Wayne Junction, 149 W. Berkley St., Philadelphia, Pa.
- Arlington Mfg. Co.**, The (Paints, cements, etc.), Canton, O.; 15 E. Van Buren St., Chicago; 536 Main St., E. Orange, N. J.
- Armington Engineering Co.** (Hoists and cranes), Wickliffe, Ohio.
- Armour Sand Paper Works** (Abrasive papers), 31st Pl. & Benson St., Chicago, Ill.; 120 Broadway, New York; 49 Commercial Wharf, Boston, Mass.; 917 Noble St., Philadelphia; 607 Postal Tel. Bldg., San Francisco; Cincinnati; Grand Rapids; Jamestown, N. Y.; Rochester; Seattle; Portland.
- ♦ **Armstrong-Blum Mfg. Co.** (Metal working tools), 339 N. Francisco Ave., Chicago, Ill.
- ♦ **Armstrong Brothers Tool Co.** (Machinists' tools), 339 N. Francisco St., Chicago, Ill. (See index to advertisements, pages 7, 8 and 9.)
- Armstrong Co.**, The (Cements, putty, etc.), 124-130 Post Ave., Detroit, Mich.
- Armstrong Cork Co.** and **Armstrong Cork & Insulator Co.** (Cork products), 124 24th St., Pittsburgh, Pa.; Baltimore, Boston, Chicago, Cincinnati, New York.
- Armstrong Machine Works** (Steam traps), Three Rivers, Mich.



- ♦ **Armstrong Mfg. Co.**, The (Stocks, dies, vises, etc.), 284 Knowlton St., Bridgeport, Conn.; 248 Canal St., New York; 171 N. Jefferson St., Chicago.
- Armstrong Mfg. Co.** (Saw tools), Portland, Ore.
- Armstrong Mfg. Co.** (Boiler grates), Springfield, O.
- Armstrong Mfg. Co.** (Gas engines and mach'y), Waterloo, Ia.; 30 Church St., New York, N. Y.
- Armstrong Mfg. Co.**, Waterloo, Ia.; Ft. Worth, Tex.; Scottsville, Ky.; Baxter Springs, Kansas.
- Armstrong Mfg. Co.**, The (Lawn sprinklers), Huntington, W. Va.
- Armstrong Truck Co.** (Truck casters), North Wales, Pa.
- Arnold Electric Tool Co., Inc.** (Electric drills), New London, Conn.
- Arnold's, G. W., Son** (Gas engines), Ionia, Mich.
- Arnold, H. H. Co.** (Milling cutters), Rockland, Mass.
- Arnold-Creager Co.**, The (Brick and tile mach'y), New London, Ohio.
- Arr-An-See Mfg. Co.** (Boiler compounds) 615 Pontiac Bldg., St. Louis, Mo.
- Arrow Boiler Compound Co.** (Boiler compounds), 3908 Olive, St. Louis, Mo.
- Arrow Forging & Tool Works** (Forged tools), 514 Laflin St., Chicago, Ill.
- Art Brass Co.**, The (Bathroom fittings), 299 E. 134th St., New York, N. Y.
- Art Metal Construction Co., Inc.** (Steel shelving), Jamestown, N. Y.
- Art Metal Radiator Cover Co.** (Radiator shields with humidifier), 2259 Oakdale Ave., Chicago, Ill., and leading cities.
- Art Metal Work, Inc.** (Wrenches), 7-15 Mulberry St., Newark, N. J.
- Artisan Mfg. Co.** (Belt shifters), Lockland, Ohio.
- Arvac Mfg. Co.** (Universal joints), Anderson, Ind.
- Asbell, The S. J., Co.** (Brass goods), 72-76 Putnam St., Paterson, N. J.
- Asbestos & Mineral Corp.** (Crude asbestos), 1819 Broadway, New York.
- Asbestos & Rubber Works of America** (Asbestos packing, etc.), 1821 Broadway, New York, N. Y.
- Asbestos Fibre Spinning Co.** (Asbestos packings, etc.), North Wales, Pa.
- Asbestos Textile Co., Inc.** (Asbestos products), 18 E. 41st St., New York.
- Asbury Graphite Mills** (graphite), Asbury, N. J.
- Ashcroft Mfg. Co.**, The (Boiler room specialties), 119 West 40th St., New York, N. Y.; Chicago.
- Asheboro Wheelbarrow Co.** (Wheelbarrows), Asheboro, N. C.; Pittsboro, N. C.
- Ashley House Sewage Disposal Co.** (Disposal outfits), 11112 S. Hoyne, Morgan Park, Chicago, Ill.
- Ashton, Laird & Co.** (Welding apparatus), 507-11 W. 45th St., New York, N. Y.
- Ashton Mfg. Co.** (Gasoline torches and firepots), 215 Emmet St., Newark, N. J.
- Ashton Valve Co.** (Valves, gauges, etc.), 161 1st St., Cambridge, Mass.; 128 Liberty St., New York; 313 W. Washington St., Chicago; 503 Mission St., San Francisco, Cal.
- Asphalt Ready Roofing Co.** (Prepared roofing), 9 Church St., New York, N. Y.
- Associated Manufacturers** (Engines, gas), Waterloo, Iowa.
- Aten Sewage Disposal Co.** (Sewage disposal system), 286 5th Ave., New York, N. Y.
- Athenia Steel Co.**, The (Tool steel), 135 Williams St., New York, N. Y.
- Athol Machine & Foundry Co.** (Machinists' tools), Athol, Mass.; Chicago, New York, 112 Market St., San Francisco.
- ♦ **Atkins, E. C. & Co.** (Saws), Indianapolis, Ind.; Atlanta, Ga.; 64 E. So. Water St., Chicago, Ill.; Memphis, Tenn.; Minneapolis, Minn.; New Orleans, La.; Park Pl., New York City; Portland, Ore.; San Francisco, Cal.; Seattle, Wash.; Vancouver, B. C.; Atlanta, Ga.; Lancaster, Pa.
- Atkins Mfg. Co.**, H. C. (Pipe nipples), St. Louis, Mo.
- Atkinson Co.**, The (Plumbers' brass goods), 575 Lyell Ave., Rochester, N. Y.
- (See index to advertisement, pages 7, 8 and 9).
- Atlantic Asbestos Co.** (Asbestos Goods), 133 N. 2nd St., Philadelphia, Pa.
- Atlantic Boiler Compound Extract Co.** (Boiler compound), 375 Sherman St., Long Island City, N. Y.
- Atlantic Filter Co.** (Water filters), 1438 Marine Nat. Bank Bldg., Buffalo, N. Y.
- Atlantic Iron & Metal Co.** (Metals), 9200 Capitol Ave., Cleveland, O.
- Atlantic Mfg. Co.**, 104 Walnut St., Wilmington, Del.
- Atlantic Metal Hose Co.** (Metal hose), 36 West 60th St., New York, N. Y.
- Atlantic Pipe & Nipple Co.** (Pipe nipples), 186-88 Vermont St., Brooklyn, N. Y.
- Atlanta Utility Works** (Weighing machines) East Point, Ga.
- Atlas Ball Co.**, 165 Broadway, New York (Alloy steel), distributed by S. K. F. Industries.
- ♦ **Atlas Bolt & Screw Co.** (Bolts, screws, nuts, etc.), 11-30 Ivanhoe Rd., N. E., Cleveland, O.
- Atlas Brass Foundry Co.** (Oil pumps), Front St., Columbus, O.
- Atlas Brass Mfg. Co.** (Plumbing brass goods), 232 Lakeside Ave., N.W., Cleveland, O.
- Atlas Brass Works, Inc.** (Plumbers' specialties), San Francisco, Cal.
- Atlas Car & Mfg. Co.** (Factory trucks), Cleveland, O.
- Atlas Engineering Co.** (Concrete mixers), 3009 Lisbon Ave., Milwaukee, Wis.
- Atlas Foundry Co.** (Welding rods), Irvington, N. J.
- Atlas-Imperial Engine Co.** (Gas engines), Oakland, Cal.
- Atlas Machine Co.**, The (Power presses and metal working machines), 140 Manhan St., Waterbury, Conn.
- Atlas Mfg. Co.** (Woodworking machinery), Orlando, Fla.
- Atlas Mineral Products Co.** (Belt dressings), Mertz-town, Pa.
- Atlas Oil Burner Co.** (Oil burners), 5812 Broadway, Chicago, Ill.
- Atlas Powder Co.** (Gunpowder), Wilmington, Del.; Boston; 120 Broadway, New York; Philadelphia; Pittsburgh; Hunsicker Bldg., Allentown, Pa.; People's Bank Bldg., Wilkes Barre, Pa.; Thompson Bldg., Pottsville, Pa.; Stahlman Bldg., Nashville, Tenn.; Holston Nat'l Bank Bldg., Knoxville, Tenn.; Brown-Marx Bldg., Birmingham, Ala.; Whitney Central National Bank Bldg., New Orleans, La.; Cosgrove Bldg., Joplin, Mo.; R. A. Long Bldg., Kansas City, Mo.; 719 N. Broadway, Pittsburgh, Kans.; 106 E. Grand Ave., McAlester, Okla.; Masonic Bldg., Houghton, Mich.
- Atlas Press Co.** (Hand presses), Kalamazoo, Mich.
- Atlas Radiator Pedestal Co.** (Radiator pedestals), 102 Williams St., Norwich, Conn.
- Atlas Tack Corp.** (Tacks, nails, rivets), Fairhaven, Mass.; Cleveland, O.
- Atlas Valve Company** (Reducing valves), 291 South St., Newark, N. J.
- Atlas Wash Tray Co.** (Laundry trays), New Haven, Conn.
- Atmospheric Conditioning Corp.**, Philadelphia, Pa.; 1301 Monadnock Block, Chicago, Ill.
- Attwood Mfg. Co.**, The (Pipe wrenches), Conneaut, O.
- Attwood & Jones Mfg. Co.** (Sawmill specialties), Stillwater, Minn.
- Aubeuf, F. J. Co., Inc.**, Oneida, N. Y.
- Auburn Hand Co.** (Tool handles), Auburn, Ind.
- Auburn Leather Goods Co.** (Leather packings), 302 Asylum St., Hartford, Conn.
- Audiffren Refrigerating Machine Co.** (Drinking water systems), 90 West St., New York, N. Y.
- Augustine Automatic Rotary Engine Co.** (Steam engines), 1862 Elmwood Ave., Buffalo, N. Y.
- Auld Co.** (Valves and governors), 12th and Thompson Sts., Philadelphia, Pa.
- Auld, The D. L. Co.** (Workmen's badges), Columbus, O.; Detroit, Boston, Chicago, Pittsburgh, Cleveland.
- Aurora Door Hanger & Specialty Co.** (Grindstones, etc.), Aurora, Ill.; Boston; Chicago.
- Aurora Steel Products Co.** (Steel lockers, shelves, etc.), Aurora, Ill.
- Aurora Steel Tank Co.** (Steel tanks), 26 N. Jefferson St., Chicago.
- Aurora Tool Works, The** (Upright drills), Aurora, Ind.
- Austin & Eddy** (Woodworking mach'y), 115 Broad St., Boston, Mass.; 133 W. Wash St., Chicago.
- Austin, G. W., & Co.** (Soil pipe, plugs, etc.), 132 High St., Boston, Mass.
- Austin, M. B. Co.** (Electric fuses), 108 S. Desplaines St., Chicago.
- Austin Machinery Corp.** (Construction machinery), 80 E. Jackson, Blvd., Chicago, Ill.
- Austin Powder Co.** (Explosives), 1229 Rockefeller Bldg., Cleveland, O.
- Austin Tool & Machine Co., Inc.** (Vises), 915 N. Murtland Ave., Pittsburgh, Pa.
- Austin-Western Road Machinery Co.**, The (Road mach'y), 910 S. Michigan Ave., Chicago, Ill.
- Auto Compressor Co.**, The, Wilmington, O.
- Auto Engine Works** (Marine engines), St. Paul, Minn.
- Autoforce Ventilating System** (Ventilators), 53 Devonshire St., Boston, Mass.; 576 St. Nicholas Ave., New York; Philadelphia; Baltimore; Cincinnati; Cleveland; Pittsburgh; St. Louis; Houston; Reno; St. Paul; Worcester; Portland; Chicago; Indianapolis; Denver; Edwardsville, Ill.; Montreal; St. John, N. B.; Calgary, Alta.; Saskatoon, Sask.; Boston; Springfield; Plymouth.
- Automatic Buffing Machine Co.** (Buffing machine), 56-58 Indiana St., Buffalo, N. Y.
- Automatic Combustion Control Co.** (Combustion controllers), 417 Bourse Bldg., Philadelphia, Pa.
- Automatic Conditioning Corp.** (Air conditioning apparatus), Lafayette Bldg., Philadelphia, Pa.
- Automatic Disinfectant Co.** (Disinfectors), Box 252, Memphis, Tenn.
- Automatic Electric Heater Co.** (Heaters), Warren, Pa.
- Automatic Electric Pump Co.** (Air pumps), 1831 Rockingham Rd., Davenport, Ia.
- Automatic Flue Blower Co.** (Flue blowers), Kansas City, Mo.
- Automatic Fuel Saving Co.** (Fuel savers), 549 W. Wash. Blvd., Chicago, Ill.
- Automatic Furnace Co.** (Smokeless furnace, etc.), First and Harshman Sts., Dayton, O.



- Automatic Machine Co.** (Lathes, etc.), Bridgeport, Conn.
- Automatic Products Corp.** (Screw machine products), 199 Eighth St., Long Island City, N. Y.
- Automatic Sprinkler Co. of America** (Automatic sprinklers), 123-133 William St., New York, N. Y.; Akron, O.; Atlanta, Ga.; Baltimore; Boston; Buffalo; Charlotte, N. C.; 209 So. La Salle St., Chicago; Columbus, O.; Dallas; Denver; Des Moines, Ia.; Detroit; Indianapolis; Kansas City; Los Angeles; Minneapolis; New Haven; New Orleans; Philadelphia; Pittsburgh; Portland; San Francisco; Scranton; Seattle; St. Louis; Syracuse; Vicksburg, Miss.
- Automatic Steam Trap and Specialty Co.** (Steam traps), 2707 Vestry Ave., Cleveland, O.
- Automatic Transmission Co.** (Wrenches), E. Spring St., Lima, Ohio.
- Automatic Transportation Co.** (Factory trucks), 2933 Main St., Buffalo, N. Y.
- Automatic Weighing Machine Co.** (Weighing machines), 138 Commerce St., Newark, N. J.
- Autovent Fan & Blower Co.** (Fans & blowers), 730 W. Monroe St., Chicago; Boston, Buffalo, Cincinnati, Cleveland, Dallas, Denver, Detroit, Indianapolis, Kansas City, Milwaukee, New Orleans, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Toledo.
- Avey Drilling Machine Co.**, (Drilling machines), Cincinnati, Ohio.
- Axelson Machine Co.** (Oil pumps), Boyle Ave. & Randolph St., Los Angeles, Cal.; Tulsa, Okla.; Coalinga, Taft, St. Louis.
- Axtell Co.** (Drilling and pumping mach'y), 8th & Grove St., Ft. Worth, Tex.
- Ayers, John W. & Son** (Counting machines), 88-90 Walker St., New York, N. Y.
- Ayling & Relchert Co.**, The (Copper floats), 713 Utica St., Toledo, O.
- B. B. Specialty Co.** (Plumbers' specialty), 433 Liberty Ave., Pittsburgh, Pa.  
(See index to advertisement, pages 7, 8 and 9.)
- B. & B. Tool & Machine Works** (Pipe cutter wheels), 4740 N. Clark St., Chicago, Ill.
- B. & F. Mfg. Co., Inc.** (Water heaters), 2018 Massachusetts Ave., Indianapolis, Ind.
- B. R. E. Mfg. Co.** (Closet seats), Hyde Park Dist., Boston, Mass.
- B. & M. Vent Co.**, The (Vent boxes), 212 N. 2d St., Philadelphia, Pa.
- B. & W. Tool & Die Co.** (Boring tools), 102 St. Clair Ave. N. W., Cleveland, O.
- Babbitt Steam Specialty Co.** (Valve wheels), Water, Spring and First Sts., New Bedford, Mass.
- Babcock & Wilcox Co.** (Power boilers), 85 Liberty St., New York, N. Y.; Atlanta; Boston; Cleveland; Cincinnati; Denver; Houston; Los Angeles; Philadelphia; Pittsburgh; Salt Lake City; San Francisco; Seattle; Tucson; Detroit; Ft. Worth; New Orleans.
- Babson-Dow Mfg. Co.** (Screw machine products), 60 Fulda St., Roxbury, Mass.
- Bacharach Industrial Instrument Co.** (Industrial instruments), 7000 Bennett St., Homewood Sta., Pittsburgh, Pa.; 1613 Chestnut St., Philadelphia; 15 Park Row, New York.
- Bache, Semon, Co.** (Gage and lubricator glasses), Greenwich and Morton Sts., New York, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Bachmann, J. & Co.** (Leather belting), 16 Reade St., New York, N. Y.
- Backmann Bros.** (Auxiliary water heaters), 711 Indiana Ave., La Porte, Ind.
- Baco Electric Co.** (Soldering irons), Bode, Iowa.
- Bacon Heater & Mfg. Co.** (Heating boilers), Builders Exchange, Cleveland, O.
- Backus Water Motor Co.** (Gas engines, vacuum cleaners), 172-182 Pennsylvania Ave., Newark, N. J.; 45 Washington St., North Boston; Philadelphia.
- Badenhausen Co.** (Power boiler), 1429 Chestnut St., Philadelphia.
- Badger Concrete Mixer Co.** (Mixers, concrete), Milwaukee, Wis.
- Badger Fire Extinguisher Co., Inc.** (Fire extinguishers), 34 Portland St., Boston, Mass.; 123 William St., New York; 507 Montgomery St., San Francisco.
- Badger Gas & Gasoline Engine Co.** (Gas engines and mach'y), Kansas City, Kan.
- Badger Meter Mfg. Co.** (Water meters), 261 Third St., Milwaukee, Wis.; 111 Wash. St., Chicago; Chamber of Commerce, Brooklyn; 414 Interstate Bldg., Kansas City, Mo.
- Badger, E. B. & Sons Co.** (Copper boilers, joints, kettles, etc.), 63-75 Pitts St., Boston, Mass.; 101 Park Ave., New York; Room 210, 616 S. Michigan Ave., Chicago.
- Badger State Machine Works** (Metal and wood-working mach'y), Beloit, Wis.
- Badger Tool Co.** (Grinders), Beloit, Wis.
- Baeder, Adamson & Co.** (Abrasive paper and cloth), Allegheny Ave. and Richmond St., Philadelphia, Pa.; 67 Beekman St., New York; 111 W. Washington St., Chicago; Boston.
- Bagley & Sewall Co.**, The (Paper mill mach'y), 101 Pearl St., Watertown, N. Y.
- Bailey & Blending Mfg. Co.** (Machine knives), Woburn, Mass.
- Bailey-Farrell Mfg. Co.** (Lead burning machines, jobbers, plumbing supplies), So. 20th & Sidney Sts., West Pittsburgh, Pa.; Huntington, W. Va.
- Bailey, Frederic T., & Co.** (Bench and sink legs), North Scituate, Mass.
- Bailey Meter Co.** (Meters), 2015 E. 46th St., Cleveland, O.
- Baird Machine Co.**, The (Power presses and mach'y), Bridgeport, Conn.
- Baird Pneumatic Tool Co.** (Pneumatic drills), Kansas City, Mo.; New York; Boston; Philadelphia; Pittsburgh; Richmond; Buffalo; Cleveland; Detroit; Chicago; Milwaukee; St. Louis; St. Paul; Los Angeles; San Francisco; Portland; Birmingham; Salt Lake City; New Orleans; Montreal; Toronto.
- Baliley, John, Iron Works**, The (Boilers, tanks and mach'y), 514 S. Delaware Ave., Philadelphia, Pa.
- Baker Bros.** (Metal working mach'y), Post and Westlake Sts., Toledo, O.
- Baker-Hansen Mfg. Co.** (Pumps & air compressors), 744-23rd Ave., Oakland, Calif.
- Baker Ice Machine Co., Inc.** (Ice mach'y), Omaha, Neb.; 621 Heed Bldg., Philadelphia, Pa.; W. 10th St., Des Moines; Kansas City, Mo.
- Baker Lead Mfg. Co.** (Lead products), Cherry, Vine and Bartlett Sts., Worcester, Mass.
- Baker Mfg. Co.** (Dump wagons), Springfield, Ill.
- Baker Mfg. Co.** (Windmills, pumps, etc.), Evansville, Wis.; Ft. Dodge; Cedar Rapids; Omaha; Minneapolis; Alameda, Cal.; Kansas City, Mo.; Oakland, Calif.
- Baker Mfg. Corp.** (Paper mill machinery), Saratoga Springs, N. Y.
- Baker, R. & L.**, New York Corp., The (Trucks, cranes, etc.), 17 Central Park West, New York.
- Baker, S. D. Mfg. Co.** (Towel bars), 234 W. 14th St., New York.
- Baker Specialty & Supply Co.** (Rubber flushing valve balls), Logansport, Ind.
- Baker Paint & Varnish Co.** (Paints, oils, greases), 218-232 Suydam Ave., Jersey City, N. J.
- Baldwin Chain & Mfg. Co.** (Transmission chains), 199 Chandler St., Worcester, Mass.
- ♦ **Baldwin Tool Works** (Scoops, spades and shovels), Parkersburg, W. Va.; Woolworth Bldg., New York.
- Baldwin, Tuthill & Bolton** (Woodworking mach'y), Grand Rapids, Mich.
- Ball Engine Co.** (Steam engines), Erie, Pa.; Board of Trade Bldg., Boston; 39 Cortlandt St., New York; 53 W. Jackson Blvd., Chicago; 1001 Arcade Bldg., Philadelphia; 520 Victoria Bldg., St. Louis; Empire Bldg., Atlanta; Mer. Library Bldg., Cincinnati; 927 Citizens Bldg., Cleveland.
- Ball Seal Generator Co.** (Heating specialties), 129 Ferry St., Easton, Pa.
- Ball & Roller Bearing Co.**, The (Ball and roller bearings), Danbury, Conn.
- Ballwood Co.**, The (Steam engines), Passaic, N. J.; 30 Church St., New York.
- Balmer, J. H. Co.** (Bathroom fittings), 160 Central Ave., Passaic, N. J.
- Baltimore Belting Co.** (Leather belting), 115 W. Lombard St., Baltimore, Md.; Spartanburg, S. C.
- Baltimore Chemical Co.** (Soldering flux), 1901 Park Ave., Baltimore, Md.
- Baltimore Cooperage Co.**, The (Water supply systems), Leadenhall and Ostend Sts., Baltimore, Md.
- Baltimore Engine Co.** (Steam engines), Baltimore, Md.
- Baltimore Gas Appliance & Mfg. Co.**, The (Gas stoves, etc.), Bayard & Hamburg Sts., Baltimore, Md.; 103 Park Ave., New York; 787 Brannan St., San Francisco, Calif.
- Baltimore Pump Co.**, The (Steam pumps), 6 E. German St., Baltimore, Md.
- Baltimore Roofing & Asbestos Mfg. Co.** (Asbestos products), Asbestos, Md.
- Baltimore Tube Co.**, Baltimore, Md.
- Baltimore Valve Co.**, The (Plumbers' brass goods), St. Clair Lane & Patterson Park Ave., Baltimore, Md.
- Bancroft & Barnard** (Woodworking machines), 210 Main St., Gardner, Mass.
- Bangor Structural Slate Co.** (Plumbing & structural slate), Bangor, Pa.
- Banner Mfg. Co.** (Basin cocks, etc.), 109 Lafayette St., New York, N. Y.
- Banning, W. E. Stamp & Stencil Works, Inc.** (Metal stamps), Clinton and Water Sts., Syracuse, N. Y.
- Bantam Ball Bearing Co.** (Ball bearings), Bantam, Conn.; 905 Dime Bank Bldg., Detroit; 1030 Polk St., San Francisco.
- Barber Asphalt Paving Co.**, The (Roofing), Land Title Bldg., Philadelphia, Pa.; Chicago; Kansas City; New York; St. Louis; Pittsburgh; Atlanta; San Francisco.
- Barber-Colman Company** (Gear hobbing machines), Rockford, Ill.; Boston; Chicago; Cleveland; Dayton; Detroit; Milwaukee; New York.

- Barber-Foster Engineering Co. (Electric hoists), 602 Barber-Foster Engineering Co. (Electric hoists), 318 Stuyvesant Bldg., Cleveland, O.; Pittsburgh, New York, San Francisco.
- Barber-Greene Co. (Conveyors and loaders), Aurora, Ill.
- Barber Mfg. Co., The (Cast iron plumbing goods), Ashtabula, O.
- Barber & Co. (Conveyor chain, lock nuts), 2328 South Western Ave., Chicago, Ill.
- Barcalo Mfg. Co. (Wrenches, pipe), Buffalo, N. Y.
- Barco Mfg. Co. (Flexible joints), 1801 Winnemac Ave., Chicago, Ill.
- Bard Mfg. Co. (Screw machine products), Royersford, Pa.
- Bard Union Co., Inc., The (Pipe unions), 103 Chestnut St., Norwich, Conn.
- Bardons & Oliver (Turret lathes), 1133 W. 9th St., Cleveland, O.; 627 Washington Blvd., Chicago, Ill.; 19 W. Woodbridge St., Detroit, Mich.
- Barham & Saunders (Plumbers' price books), 360 E. Main St., Rochester, N. Y.
- Barker Factory, The (Gas engines), Norwalk, Conn.
- Barlow Bros. (Leather belting), 543 N. 64th St., Philadelphia, Pa.
- Barnard Mfg. Co. (Mill and elevator mach'y), Spokane, Wash.
- Barnard & Leas Mfg. Co. (Flour mill and elevator mach'y), Moline, Ill.
- Barnes Drill Co. (Metal working mach'y), Rockford, Ill.
- Barnes Foundry Co. (Grates), 1st, 2nd & Henderson Sts., Jersey City, N. J.
- Barnes, Henry K., Co. (Leather belting), 234-236 Devonshire St., Boston, Mass.
- Barnes Mfg. Co., The (Pumps and plumbers' supplies), Mansfield, O.; 59 Pearl St., New York.
- Barnes Tool Co., The (Plumbers' tools), 152 Brewery Ave., New Haven, Conn.; 38 Vesey St., New York.
- Barnes, Wallace Co., The (Springs), Box 506, Bristol, Conn.; Book Bldg., Detroit, Mich.
- Barnes, Wm. O. (Cutter grinders), Leominster, Mass.
- Barnes, W. O. Co. (Saws), 1216 Beaubien St., Detroit, Mich.; Chardon St., Boston, Mass.; 189 W. Madison St., Chicago.
- Barnes & Irving, Inc. (Rotary hack saws), 565 S. Clinton St., Syracuse, N. Y.
- Barnett, G. & H. Co. (Files), 1076 Frankfort Ave., Philadelphia, Pa.
- Barney Ventilating Fan Works (Fans), 25 Haverhill St., Boston, Mass.
- Barnett Foundry & Machine Co. (Vises), Lyons Ave. and Coit St., Irvington, N. Y.
- Barnstead Still & Sterilizer Co. (Water stills), Boston, Mass.
- Barnum Bros. Co. (Leather belting), 179 River St., Troy, N. Y.
- 2031 Euclid Ave., Cleveland, O.
- Barr, H. Edsall (Power hammers), Erie, Pa.
- Barrett Company, The (Roof connections), 17 Battery Pl., New York, N. Y.
- Barrett-Cravens Co. (Factory trucks), 169-173 N. Ann St., Chicago, Ill.; 51 E. 42d St., New York, N. Y.
- Barrett Machine Tool Co. (Metal working machines), Meadville, Pa.
- Barrett Machine Co., The (Oil well wrenches), Pittsburgh, Pa.
- Barrett Mfg. Co. (Paints), 17 Battery Pl., New York, N. Y.
- Barrett Sales Co., The (Expansion bolts, etc.), 568 W. Washington Blvd., Chicago, Ill.; 30 Warren St., New York; Metropolitan Bldg., Los Angeles, Calif.
- Barrett, W. L. (glass cutters), Bristol, Conn.
- Barry Co. (Steel pulleys), Muscatine, Iowa.
- Barry Mfg. Co. (Filing machines), 515 W. Monroe St., Chicago, Ill.
- Barshal Company, The (Steel shelves, lockers, etc.), 2031 Euclid Ave., Cleveland, O.; 105 W. Monroe St., Chicago; 1655 Blake St., Denver; 1270 Broadway, New York; 410 Franklin Trust Bldg., Philadelphia; 7104 Jenkins Arcade, Philadelphia; 307 Boyd Park Bldg., Salt Lake City; 134 Spring St., San Francisco.
- Bartlett, A. F. & Co. (Engines, boilers, mach'y), Saginaw, Mich.
- Bartlett, C. O. & Snow Co., The (Heavy mach'y), French and Fall Sts., Cleveland, O.
- Bartlett, Edwin E. (Metal working mach'y), 41 Crown St., Nashua, N. H.
- Bartlett Mfg. Co. (Tinners' snips), 437 East Lafayette St., Detroit, Mich.
- Bartlett & Hayward Co., The (Gas plant apparatus), Scott & McHenry Sts., Baltimore, Md.; 100 Broadway, New York.
- Bartley Graphite Products Co. (Graphite), Bartley, N. J.
- Bartley, R. C. Co., The (Heating boilers), Bartley, N. J.
- Bartley, Wm., & Sons (Heating boilers and sawmill mach'y), Bartley, N. J.
- Barwood, L. J., Mfg. Co., The (Packings and washers), 43 Pine St., Stoneham, Mass.
- Bashlin Co., The (Steam and plumbing brass goods), Warren, Pa.
- Bass Bros. (Woodworking mach'y guards), 407 Broadway, New York, N. Y.
- Bass Foundry & Machine Co., The (Engines, boilers, heaters, etc.), Fort Wayne, Ind.
- Bassick Co., The (Casters), Bridgeport, Conn.
- Bastian-Blessing Co. (Brass foundries and finishers), 125 W. Austin Ave., Chicago, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Bastian-Morley Co., The (Water heaters), La Porte, Ind.; Los Angeles, Cal.; San Francisco, Chicago.
- Batavia Clamp Co. (Clamps and jacks), Batavia, N. Y.
- Bate, Wm. T., & Son (Boilers, heaters, grates), Conshohocken, Pa.
- Bateman & Companies, Inc. (Cotters & keys), Grenloch, N. J.; Worcester, Mass.
- Bates & Edmonds Motor Co. (Gas engines), Lansing, Mich.
- Bates, Edw. P. (Boilers, vises, steam specialties), 228 West Water St., Syracuse, N. Y.
- Bates Machine & Tractor Co. (Engines, compressors, heaters), Joliet, Ill.
- Battle Creek Sand Sifter Co. (Sand sifters), Battle Creek, Mich.
- Bauch, Walter (Gas stoves), 8651 Vincennes Rd., Chicago, Ill.
- Bauer, A. E. & Son, (Wood trimmers), 1342 W. 69th St., Chicago.
- Baumgarten & Wyler (Brass specialties), El Paso, Tex., Box 636.
- Baum's Castorine Co. (Greases, oils, polishes), Rome, N. Y.
- Baush Machine Tool Co., (Metal working mach'y), Springfield, Mass.
- Bay City Iron Co. (Boilers and tanks), First & Madison Ave., Bay City, Mich.
- Bay Ridge Specialty Co., Inc. (Bathroom specialties), 632 Stokes Ave., Trenton, N. J.; Phoenix Bldg., Minneapolis.
- Bayshaw & Field (Lathe tools), 445 N. 5th St., Philadelphia, Pa.
- Bay State Belting Co. (Leather belting), 349 Congress St., Boston, Mass.
- Bay State Emery Wheel Co. (Grinding wheels), Worcester, Mass.
- Bay State Machine Co. (Gasoline engines), Front St., Erie, Pa.
- Bay State Pump Co. (Wrenches), 100 Purchase St., Boston, Mass.
- Bay State Stamping Co. (Stamped metal goods), 380 Chandler St., Worcester, Mass.
- Bay State Tap & Die Co., The (Taps, dies, reamers), Mansfield, Mass.
- Bayard, M. L. & Co. (Engine governors), 20th St. and Indiana Ave., Philadelphia, Pa.
- Bayer Co., The (Valves), 4067 Park Ave., St. Louis.
- Bayer Steam Soot Blower Co. (Flue cleaners), 4067 Park Ave., St. Louis, Mo.; 110 W. 34th St., New York.
- Bayerson Oil Works (Lubricating oils), E. 12th St. and P. & E. R. R., Erie, Pa.; 408 Colonial Bldg., Boston, Mass.
- Bayley Mfg. Co. (Steam engines, blowers), 732-766 Greenbush St., Milwaukee, Wis.; 1156 1st Nat'l Bk. Bldg., Chicago, Ill.; Engineers Bldg., Cleveland, O.
- Baylis Sanitary Supply Co. (Wiping cloths), 341 West Superior St., Chicago, Ill.
- Bayonne Bolt & Nut Co. (Bolts, screws, etc.), Bayonne, N. J.
- Beach Mfg. Co. (Woodworking mach'y), Montrose, Pa.
- Beach Mfg. Co. (Boiler grates), Charlotte, Mich.
- Beach-Russ Co. (Blowers, pumps, compressors), 220 Broadway, New York, N. Y.; Chicago, Philadelphia, Baltimore.
- Beach, H. B. & Son (Steam boilers), 135 Grove St., Hartford, Conn.
- Beall Bros. (Shovels, picks, hoes), Alton, Ill.
- Beaman & Smith Co., The (Metal working mach'y), Providence, R. I.; Marquette Bldg., Chicago, Ill.
- Bean Spray Pump Co. (Centrifugal pumps), San Jose, Cal.; Lansing, Mich.; Los Angeles, Cal.; Fresno, Cal.
- Bearings Co. of America (Ball bearings), Lancaster, Pa.; Ford Bldg., Detroit, Mich.
- Beaton, A. J., Mfg. Co. (Floor and ceiling plates), New Britain, Conn.
- Beaton & Cadwell Mfg. Co., The (Floor and ceiling plates), New Britain, Conn., 234 Water St., New York, N. Y.
- Beaton & Corbin Mfg. Co., The (Floor and ceiling plates), 231 Main St., Southington, Conn.
- (See index to advertisement, pages 7, 8 and 9.)
- Beatty Machine & Mfg. Co. (Punching presses), Hammond, Ind.
- Beaudry & Co., Inc. (Power hammers), 141 Milk St., Boston, Mass.
- Beaudry, T. Joseph & Son, (Tools), Marlboro, Mass.
- Beaumont Iron Works Co. (Well drillers), Beaumont, Tex., P. O. Box 926.
- Beaumont, R. H. Co. (Coal conveyors), 321 Arch St., Philadelphia, Pa.
- Beaumont Valve & Hydrant Works (Fire hydrants), 126 Washington Ave., Kankakee, Ill.
- Beck, Wm. & Chas., Co. (Linen hose), Lawrence, Mass.
- Becker Mfg. Co. (W. C. seats and tanks), Pike & Green Sts., Marietta, O.

- Becker Milling Machine Co. (The (Metal working mach'y), Hyde Park, Mass.; 642 Beaubien St., Detroit, Mich.; 53 Franklin St., Boston.
- Beckley Perforating Co. (Screens), Garwood, N. J.
- Beckman-Dawson Roofing Co. (Ready roofing), 19 S. La Salle St., Chicago, Ill.
- Bedford Foundry & Machine Co. (Traveling cranes), Bedford, Ind.; Chicago; New York.
- Beers, I. Frank (Thermostats), 1160 Portland Ave., Rochester, N. Y.
- Beggs, James, & Co. (Boilers, filters, etc.), 36 Warren St., New York, N. Y.; 522 Guardian Bldg., Cleveland, O.
- Beggs Pipe & Foundry Co. (Sole pipe & fittings), Birmingham, Ala.
- Behr, Herman, & Co., Inc. (Abrasive papers), 61 Broadway, New York, N. Y.; Boston; Chicago; Grand Rapids; St. Louis; San Francisco.
- Behringer, Edward A., Inc. (Rubber bags, plugs, etc.), 98 Park Place, New York, N. Y.
- Beliman, W. E. (Water heaters), 448 Niagara St., Buffalo, N. Y.
- Belcher & Taylor Agricultural Tool Co. (Factory trucks), Chicopee Falls, Mass.
- Belden, A. G., & Co. (Belt dressing), 29 Burling Slip, New York, N. Y.
- Belden Machine Co., The (Wrenches, nail pullers), New Haven, Conn.
- Belden Mfg. Co. (Friction clutches), Fremont, O.
- Belfield, H. Co. (Steam specialties), 425 N. Broad St., Philadelphia, Pa.
- Belknap Mfg. Co., The (Steam-gas-water brass goods), 149 Water St., Bridgeport, Conn.
- Bell, Andrew, Estate of (Rubber washers, balls, etc.), 2-4-6 Commercial Ave., Newark, N. J.  
(See index to advertisement, pages 7, 8 and 9.)
- Bell Co., The (Screw machine products), 1555 Fillmore Ave., Buffalo, N. Y.
- Bell Electric Motor Co. (Motors and dynamos), 30 Church St., New York, N. Y.
- Bell & Gossett Co. (Case hardening compounds), 117 N. Dearborn St., Chicago, Ill.
- Bell Specialty Co. (Roof flashing), 510 W. 12th St., Des Moines, Ia.
- Bellefonte Engineering Co. (Power hammers), Bellefonte, Pa.
- Bellevue Industrial Cornice Co. (Gas furnaces), 2971 Bellevue Ave., Detroit, Mich.
- ♦ Belmont Packing & Rubber Co. (Packings), 133-135 N. 2nd St., Philadelphia, Pa.; 99 Chambers St., New York; 38 N. Franklin St., Chicago.
- Belt Grip Pulley Co. (Pulley covering), 182 Breckenridge St., Buffalo, N. Y.; 307 Free Press Bldg., Detroit; 414 Atlantic Ave., Boston.
- Bemis & Call Hdw. & Tool Co. (Small tools), Springfield, Mass.
- Bennett-Dreyer Belting Co. (Leather belting), 3109 N. 9th St., St. Louis, Mo.
- Bennett Furnace Co., The (Heating furnaces), 6531 Euclid Ave., Cleveland, O.
- Bennett Metal Treating Co. (Hardening compound), Elmwood, Conn.
- Bennett, W. R., Co. (Metal treating furnaces), Elmwood, Conn.
- Bennington Scale Co. (Scales), Bennington, Vt.; New York, Boston, Portland.
- Bens, S. J., Mfg. Corp., The (Holders, toilet paper), Herkimer, N. Y.
- Benson, Alexander R., Co., Inc. (Soldering materials), Hudson, N. Y.
- Benson, H. K. & F. S. (Sheet metals), Glen Ridge, N. J.
- Berger Bros. Co. (Tinner's and roofers' supplies), 229-237 Arch St., Philadelphia, Pa.
- Berger Mfg. Co., The (Sheet metal products), Canton, O.; New York; Boston; Philadelphia; St. Louis; Minneapolis; San Francisco; Atlanta.
- Berger Specialty Mfg. Co. (Plumbers' specialties), 14-18 N. 20th St., Richmond, Va.
- Berghauer Machine Co. (Drilling machines), Cincinnati, O.
- Berglass, M. P., Mfg. Co. (W. C. seats and tanks), Fulton, Furman, Doughty Sts. and Columbia Heights, Brooklyn, N. Y.; Norwich, N. Y.
- Bergman Tool Mfg. Co. (Small tools), 1573-75 Niagara St., Buffalo, N. Y.
- Berkeley Mfg. & Supply Co. (Waste and packing), 640 Pavonia Ave., Jersey City, N. J.; F. B. Potterton, Sales Agt., 83 John St., New York.
- Berkefeld Filter Co. (Water filters), 4 Cedar St., New York, N. Y.
- Berkshire Mfg. Co., The (Foundry equipment), Whitney Bldg., Cleveland, O.
- Bernz Co., Otto (Plumbers' tools), 21-43 Ashland St., Newark, N. J.; 38 Vesey St., New York; San Francisco.
- Berry, A. Hun., Fan Co. (Exhaust fans), 28 Binford St., Boston, Mass.
- Berry Engineering Co., The (Steam boilers and specialties), Chester, Pa.; 136 Liberty St., New York; Montreal.
- Bertsch & Co. (Punching machines), Cambridge City, Ind.
- Bertschy Engineering Co. ("V" Belting, etc.), Cedar Rapids, Ia.
- Best, Charles H., & Co. (Machinists' tools and machines), 118 N. Clinton St., Chicago, Ill.
- Bessemer Gas Engine Co. (Engines, pumps and compressors), Grove City, Pa.; Pittsburgh; Tulsa, Okla.; Bartlesville, Okla.; Parkersburg, W. Va.; New York; Fort Worth, Tex.
- Best Co. (Pipe bends and coils), 1409 Arrott Bldg., Pittsburgh, Pa.
- Best, L., Co. (Grinding wheels), 75 Barclay St., New York, N. Y.
- Best Leather Nut Co. (Leather specialties), Stoneham, Mass.
- Best, W. N., Furnace & Burner Corp. (Oil burners and furnaces), 11 Broadway, New York.
- Bethlehem Foundry & Machine Co. (Hydraulic mach'y), Bethlehem, Pa.; 149 Broadway, New York City.
- ♦ Bethlehem Steel Co. (Steel mill products), Bethlehem, Pa.; Boston; New York; Philadelphia; Pittsburgh; Cleveland; Baltimore; Atlanta; Detroit; St. Louis; Chicago; San Francisco.
- Bettcher Stamping & Mfg. Co., The (Metal stampings), Clark Ave., C. C., C. & St. L. Ry., Cleveland, O.
- Bettes, A. O., Mfg. Co. (Metal polish), 1208 E. 12th St., Kansas City, Mo.
- Betton, J. M. (Sand blast machines), 59 Pearl St., New York, N. Y.
- Betts Machine Co. (Metal working machines), Rochester, N. Y.
- Bevin Bros. Mfg. Co. (Bells and gongs), East Hampton, Conn.
- Beyer Machine Co., (Foundry riddles), Main St., Jackson, Mich.
- Bickelhaupt, G., Skylight Works (Skylights), 722 11th Ave., New York, N. Y.
- Bickford, H., & Co. (Metal working machines), Lakeport, N. H.
- Bickford-Switzer Co., The (Drill grinders), Greenfield, Mass.
- Bickford & Francis Belting Co. (Leather belting), 35 Pearl St., Buffalo, N. Y.
- Bicknell-Thomas Co. (Shaft clutches), Greenfield, Mass.
- Biddison Mfg. Co., The (Force feed lubricators), Madison, Wis.
- Biehl Iron Works, Inc., The (Tar heaters, etc.), Reading, Pa.
- Bierman-Everett Foundry Co. (Welding supplies), Irvington, N. J.
- Bigelow Co., The (Boilers and tanks), New Haven, Conn.; 85 Liberty St., New York; 141 Milk St., Boston; Realty Bldg., Philadelphia.
- Biggar Brothers (Loose pulley oilers), Oneida, N. Y.
- Biggs Boiler Works Co., The (Steel tanks), 1007 Bank St., East Akron, O.  
(See index to advertisement, pages 7, 8 and 9.)
- Biggs Pump & Supply Co. (Wooden pumps), 503 N. 13th St., Lafayette, Ind.
- Bignall Co., The (Iron plumbing goods), 621-623 Main St., Medina, N. Y.
- Bignall & Keeler Machine Works (Pipe threading machines), Edwardsville, Ill.
- Bigsby Metals Co., The (Babbitt, metal), 411 Long Ave., Cleveland; 628 McCormick Bldg., Chicago.
- Bi-Lateral Fire Hose Co. (Hose) 326 W. Madison St., Chicago, Ill.
- ♦ Billings & Spencer Co., The (Small tools), Hartford, Conn.
- Billington, Jas. H., Co. (Leather belting), 113 Chestnut St., Philadelphia, Pa.
- Billstrom, Nels J. (Woodworking mach'y), 2002 9th St., Rockford, Ill.
- ♦ Bilton Machine Tool Co. (Slitting & drilling machines), 555 Washington Ave. No., Bridgeport, Conn.
- Bilt-Rite Equipment Co. (mach'y drilling), 98 Beacon St., Worcester, Mass.
- Binder, John F. (Range boiler and heater), 190 N. La Salle St., Chicago.
- Binghamton Boiler Compound Co. (Boiler compounds), 330 Water St., Binghamton, N. Y.
- Binks Spray Equipment Co. (Painting machines, vehicle washers), 3114-28 Carroll Ave., Chicago, Ill.
- Birch Pump Valve Mfg. Co. (Valves), 1521-1523 Sedgwick St., Chicago, Ill.
- Bird-Archer Co., The (Boiler compounds), 90 West St., New York, N. Y.; Philadelphia, Cobourg, Canada; Chicago, St. Louis.
- Bird, F. W. & Son (Roofing), East Walpole, Mass.
- Birdsall, W. A., & Co. (Heating boilers), 18-20 Mechanic St., Newark, N. J.
- Birdsboro Steel Foundry & Machine Co. (Belt lacing machines), Birdsboro, Pa.
- Birkenstein, S., & Sons, Inc. (Foundry equipment), 409 W. Ontario St., Chicago, Ill.; Times Bldg., New York; 25th and Ellsworth Sts., Philadelphia; Temple Court Bldg., Minneapolis, Minn.
- Birkie Machine Works (Cast-iron pulleys), 126-128 S. Clinton St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Birmingham Machine & Foundry Co. (Steam engines), Birmingham, Ala.
- Bishop, Geo. H. & Co. (Saws), Lawrenceburg, Ind.; Atlanta, Boston, Chicago, New York, Portland.



- Bishop & Babcock Co. (Brass goods), 1200 E. 55th St., Cleveland, O.; 376-380 Lafayette St., New York; Cincinnati, Chicago, Milwaukee, St. Paul, Dallas, Detroit, Pittsburgh, St. Louis, Denver, Atlanta, San Francisco.
- Bishop, Robert, Mfg. Co. (Cotton waste), 157 W. 6th St., Boston, Mass.
- Bissell Co., F. (Sewer rods), Toledo, O.
- Black Bear Co., The (Boiler compounds), 138-142 Temple St., Long Island City, N. Y.
- Black Bros. Co. Woodworking mach'y, Mendota, Ill.
- Black-Clawson Co., The (Paper mill machinery), Hamilton, O.
- Black & Decker Mfg. Co., The (Special machinery), Towson Heights, Baltimore, Md.; 2920 Equitable Bldg., New York City; 502 Widener Bldg., Philadelphia, Pa.; 314 Chamber of Commerce Bldg., Atlanta, Ga.; 918 Hearst Bldg., San Francisco, Calif.; 1438 S. Michigan Ave., Chicago, Ill.; 115-117 State St., Detroit, Mich.; 1580 E. Main St., Columbus, O.; 228 Georgia St., Buffalo, N. Y.; 169 Massachusetts Ave., Boston, Mass.; Kansas City.
- Black Diamond Mfg. Co. (Belt fasteners), Bank and Turner Sts., Cincinnati, O.
- Black Diamond Saw & Machine Works (Saws and saw tools), Natick, Mass.
- Blackburn-Smith Corp., The (Feed water filters), 105 W. 40th St., New York.
- Blackmer Rotary Pump Co. (Rotary pumps), Petoskey, Mich.; Chicago, Detroit, Houston, Kansas City, Minneapolis, New York, Philadelphia, San Francisco, Pittsburgh.
- Blair Mfg. Co. (Friction clutches), 209 S. 2d St., Camden, N. J.
- Blairsville Iron Works (Ingot moulds), Blairsville, Pa.
- Blake, H. A. & Son (Castings), Cheboygan, Mich.
- Blake & Johnson Co., The (Rivets, screws, etc.), Waterbury, Conn.
- Blake Pump & Condenser Co. (Pumps), Fitchburg, Mass.
- Blake Specialty Co., Inc. (Iron plumbing goods), 1600 Mill St., Rock Island, Ill.
- Blake, W. L. & Co. (Oils and greases), 79-85 Commercial St., Portland, Me.
- Blakeslee Mfg. Co. (Steam pumps, etc.), 30 Duquoin St., Duquoin, Ill.
- Blanchard Machine Co., The (Grinders, oil engines), 64 State St., Cambridge, Mass.
- Blanche, L. C. Co., Inc. (Drills, taps & tool steel), 10 Thomas St., New York; 642 Washington Boul., Chicago, Ill.; Taunton, Mass.
- Blandin Co., Inc. (Leather belting), 313 Methuen St., Lawrence, Mass.
- Blatchford, E. W. Co. (Lead products), 230 N. Clinton St., Chicago, Ill.
- Blaw Knox Co. (Concrete construction forms and structural steel works), Pittsburgh, Pa.
- Blessing, C. A. (Plumbing fixtures and fittings), 516 Montgomery Ave., Philadelphia, Pa.
- Bliss, E. W. Co. (Sheet metal working mach'y), 2nd Natl. Bank Bldg., New Haven, Conn.; 2117 Dime Bank Bldg., Detroit; 122 S. Michigan Ave., Chicago; Union Bank Bldg., Cleveland, Ohio; Marine Bank Bldg., Buffalo; Union Trust Bldg., Cincinnati; Boatmen's Bank Bldg., St. Louis; Keenan Bldg., Pittsburgh.
- Bliss & Laughlin, Inc. (Steel shafting, etc.), Harvey, Ill.
- Bloch Brass Co., Inc. (Plumbing brass goods), 511 West 42d St., New York.
- Blodgett, The G. S. Co., Inc. (Core ovens), Burlington, Vt.
- Blomfeldt & Rapp (Sheet metal dies), 108 N. Jefferson St., Chicago, Ill.
- Blomquist-Eck Machine & Mfg. Co. (Riveting machines), 1146 E. 152d St., Cleveland, O.
- Blonck, W. A. & Co. (Boiler efficiency meters), 1357 N. Wells St., Chicago, Ill.
- Bloom Flusher Co. (Flushing devices), Tiffin, O.
- Blount, J. G. Co. (Lathes and grinders), Everett, Mass.
- Blue Ball Machine Works (Gas engines), Blue Ball, Pa.
- Blue Seal Chemical Co. (Pipe cleaning compounds), 126 Locust St., Roselle, N. J.
- Blum, Julius, & Co. (Steel tubing), 532-540 W. 22nd St., New York, N. Y.; 2126 Land Title Bldg., Philadelphia, Pa.
- Boardman, Robert, Co., Ltd., The (Well drilling tools), Oil City, Pa.
- Bobrick Chemical Co. (Dispensers soap), Los Angeles, Cal.
- Bock Bearing Co., The (Roller bearings), Phillips Ave. & M. C. R. R., Toledo, O.
- Bodine Electric Co. (Motors and tools), 2254 W. Ohio St., Chicago, Ill.; Boston; New York; Cincinnati; Philadelphia.
- Boe, H. M. Co. (Garage equipment), 2416 University Ave., S. E., Minneapolis, Minn.
- Boekel, William & Co. (Plumbers' pumps, torches, brass goods), 518 Vine St., Philadelphia, Pa.
- Boeger-Meyer Mach. & Tool Co. (coupling shaft), Lafayette & Bruen St., Newark, N. J.
- Boettiger, Christ (Pipe joint paste), 2316 Peach St., Erie, Pa.
- Bogardus-Nelson Co. (Pressure gauges, valves, etc.), Marshalltown, Ia.
- Bohrer, R. E. (Laundry tray legs), 347 North St., Rochester, N. Y.
- Boiler-Kote Co., The (Boiler compound), 608 S. Dearborn St., Chicago, Ill.
- Boiler Room Improvement Co. (Smoke indicators), 8 S. Dearborn St., Chicago, Ill.
- Boiler Tube Company of America (Boiler tubes), 1228 Park Bldg., Pittsburgh, Pa.; 61 Broadway, New York; 809 Peoples Gas Bldg., Chicago; 902 First Natl. Bank Bldg., Birmingham.
- Boker & Co., H., Inc. (Small tools), 101-103 Duane St., New York, N. Y.; Chicago; Boston; Cleveland; Philadelphia.
- Bon Mfg. Co. (Vise jaws), Elgin, Ill.
- Bonar, James, & Co., Inc. (Steam specialties), Park Bldg., Pittsburgh, Pa.
- Bond, Chas., Co. (Leather belting), 617-619 Arch St., Philadelphia, Pa.
- ♦ Bond Foundry & Machinery Co. (Power transmission mach'y), Mannheim, Lancaster Co., Pa.; 520 Arch St., Philadelphia, Pa.
- ♦ Bonner & Barnevall, Inc. (Leather belting), 30 Church St., New York, N. Y.; Charlotte, N. C.; Chicago, Detroit, Providence.
- Bonney Forge & Tool Works (Vises, wrenches, etc.), Allentown, Pa.
- Bonnot Co., The (Machinery and warm air furnaces), Canton, Ohio; 211 Higgins Bldg., Los Angeles, Cal.; 909 N. Y. Life Bldg., Kansas City, Mo.
- Booth Electric Furnace Co. (Electric furnaces), 326 W. Madison St., Chicago, Ill.; Baltimore, Buffalo, Birmingham, Cleveland, Detroit, Los Angeles, New York, Philadelphia, St. Louis.
- Booth Felt Co., Inc., The (Mechanical felt goods), 463-473 19th St., Brooklyn; 732 Sherman St., Chicago.
- ♦ The Borden Co., Warren, O.; 907 Flatiron Bldg., New York; 66 Richmond St., Toronto; 1310 Winona Ave., Chicago. Manufacturers of:  
(See index to advertisement, pages 7, 8 and 9).
- Bordentown Steel & Tube Corp. (Steel tubing), Bordentown, N. J.
- Bordo, L. J. Co. (Steam specialties), 12th and Thompson Sts., Philadelphia, Pa.
- Borger Bros. Co. (Boilers and heaters), Columbus, O.
- Borgeson Mfg. Co., Inc., The (Universal joints), Torrington, Conn.
- Borromite Co. of America, The (Water heaters and softeners), 105 W. Monroe St., Chicago, Ill.; 10 High St., Boston, Mass.; 412 Interstate Bldg., Kansas City; Pike & Parrott, Los Angeles; 213 Rialto Bldg., San Francisco.
- Boss Nut Co. (Screw machine products), 1732 N. Kolmar Ave., Chicago.
- Boston Belting Co. (Mechanical rubber goods), 80 Elmwood St., Boston, Mass.; 100 Reade St., New York; 90 Pearl St., Buffalo; 308 W. Madison St., Chicago; 55 Hobart Bldg., San Francisco.
- Boston Brass Co. (Brass plumbing goods), Bacon and Plympton St., Waltham, Mass.
- Boston Felt Mfg. Co. (Mechanical felt goods), 110 Beach St., Boston, Mass.
- Boston Filter Co. (Filters and coolers), 35 Broadway, Chelsea, Mass.; 223 S. 11th St., Philadelphia.
- Boston Gear Works (Gears), Norfolk Downs, Quincy, Mass.; 623 West Washington Blvd., Chicago.
- Boston Machine Screw Co. (Machine screws), Cambridge, Mass.
- Boston Saw & Tool Co., Inc. (Hack saw blades), 76 Freeport St., Boston, Mass.; 29 Murray St., New York, N. Y.
- Boston Scale & Machine Co. (Drilling plates), 100 Rugles St., Boston, Mass.
- Boston Self-Locking Block Co. (Tackle blocks), 514 Arch St., Philadelphia, Pa.
- Boston Steam Specialty Co. (Steam specialties), 170 Congress St., Boston, Mass.
- Boston Woven Hose & Rubber Co. (Mechanical rubber goods), 29 Hampshire St., Cambridge, Mass.; 170 Summer St., Boston; 961 Drexel Bldg., Philadelphia; 508 D. S. Morgan Bldg., Buffalo; 511 Security Bldg., St. Louis; 461 Market St., San Francisco; 332 S. Mich. Ave., Chicago; 439 Water St., Pittsburgh; 30 Church St., New York.
- ♦ Boston & Lockport Block Co. (Tackle blocks), 118 Condon St., Boston, Mass.
- B. O. T. Mfg. Co., Trenton, N. J.
- Bottom Valve Co., 211 W. Schiller, Chicago, Ill.
- Boulet's Fine Tool Works (Indicators and micrometers), Sebago Lake, Me.
- Bound Brook Oil-less Bearing Co. (Bearings and bushings), Bound Brook, N. J.; Ford Bldg., Detroit, Mich.
- Bourbon Copper & Brass Works, The (Hydrants and valves), 618-620 East Front St., Cincinnati, O.
- Bourne Fuller Co., The (Bolts and nuts), Cleveland, O.
- Bourneuf, Louis, Corporation (Roof flanges), Oxford St., Lynn, Mass.
- Bousman Mfg. Co. (Oil filters), 1157-59 Plainfield Ave., Grand Rapids, Mich.

- Boust, A. C.** (Drilling machines), Northumberland, Pa.  
**Bowen Products Corporation** (Oil and grease cups), Auburn Division, Auburn, N. Y.; 220 Broadway, New York, N. Y.; 2112 Mich. Ave., Chicago, Ill.; Monadnock Bldg., San Francisco, Cal.; 181 Moss Ave., Boston; 311 Am. Natl. Bank Bldg., Richmond, Va.; 603 E. Platinum St., Butte, Mont.  
**Bowen Products Corp.**, Minneapolis Division (Grease cups), Minneapolis, Minn.  
**Bowen Products Corp.**, Winkley Division (Oiling devices), 2760 W. Warren St., Detroit, Mich.  
**Bowers Pottery Co.** (Sanitary earthenware), Mannington, W. Va.; 332 So. Mich., Chicago; 506 Security Bldg., St. Louis, Mo.; 138 Front St., San Francisco, Cal.  
**Bower Roller Bearing Co.** (Roller bearings), 3040 Hart, Detroit, Mich.  
**Bowlus Mfg. Co.**, The (Automatic water closets), Main and Center Sts., Springfield, O.  
**Bowser, S. F. & Co., Inc.** (Oil storage equipment), Ft. Wayne, Ind.; 141 Milk St., Boston; 60 Church St., New York; Broad and Race Sts., Philadelphia; 243 So. Dearborn, Chicago; 612 Howard St., San Francisco; 66 Frazier Ave., Toronto; Atlanta; St. Louis; Dallas; Minneapolis.  
**Bowsher, N. P. & Co.**, The (Wooden cogs), 925 Webster St., South Bend, Ind.  
**Box, Alfred, & Co., Inc.** (Chain holsts), Front and Poplar Sts., Philadelphia, Pa.; Woolworth Bldg., New York; Oliver Bldg., Pittsburgh.  
**Boye & Emmes Machine Tool Co.**, The (Engine lathes), 2260 Spring Grove Ave., Cincinnati, O.  
**Boyle, C. A. & Co.** (Shower bath curtains), 643 Washington Blvd., Chicago, Ill.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Boynton Furnace Co.** (Heating furnaces and boilers), 106 W. 37th St., New York, N. Y.; 129 W. Lake St., Chicago; 230 Pacific Ave., Jersey City.  
**Boys, Porter & Co.** (Steam pumps), Connellsville, Pa.  
**Boylston Steam Specialty Co.** (Steam specialties), 116 W. Illinois St., Chicago, Ill.  
**Bozeman Mfg. Co.** (Tank balls), 312-14 W. Redwood St., Baltimore, Md.  
 W. Illinois St., Chicago, Ill.  
**Bradford Belting Co.**, The (Leather belting), Walnut and 2d Sts., Cincinnati, O.  
**Bradford, Wm. A., Co.** (Soil pipe hooks), Chestnut St., Quincy, Mass.  
**Bradford Machine Tool Co.** (Lathes), 8th and Evans Sts., Cincinnati, O.  
**Bradford Supply Co.** (Gas engines), 140 Main St., Bradford, Pa.; Chanute, Kan.; Iola, Kan.; Irving, Ky.; Robinson, Ill.; Sistersville, W. Va.; Warren, Pa.; Wichita Falls, Texas; Ionia, Pa.; Grenola, Kan.; Iowa Park, Tex.; Burkburnett, Texas.  
**Bradlee & Co., Inc.** (Chains), 725 Richmond St., Philadelphia, Pa.  
**Bradley, A. J. Mfg. Co.** (Stencil ink), 101A Beekman St., New York, N. Y.  
**Bradley, C. C. & Son** (Forges and power hammers), 432 N. Franklin St., Syracuse, N. Y.  
**Bradley's G. W. Sons** (Small tools), Westport, Conn.  
**Bradley Gln-Saw Filer Co.** (Gln saw filers), Dallas, Tex.  
**Bradley Pulverizer Co.** (Crushing machinery), Allentown, Pa.  
**Bradley Stencil Machine Co.** (Stencil machines), St. Louis, Mo.; 565 W. Washington Blvd., Chicago.  
**Bradley Wash Fountain Co.** (Wash fountains), Milwaukee, Wis.  
**Bradley Machine Co., Inc.** (Portable cranes), Middletown, N. Y.  
**Bradway, C. P., Machine Works** (Water wheels), West Stafford, Conn.  
**Brady Brass Co.** (Metals), 170 14th St., Jersey City, N. J.  
**Brady, The J. A., Foundry Co.** (Boiler room equipment), 4500 S. Western Ave., Chicago, Ill.  
**Brading & Packing Works of America, Inc.** (Asbestos packings), 647-49 Washington Ave., Brooklyn, N. Y.  
**Braman, Dow & Co.** (Steam jacket kettles), 239-245 Causeway St., Boston, Mass.; 214 Summer St., Worcester, Mass.  
**Branch Belting Supply Co.** (Woven belting), Lockport, N. Y.  
**Brandt & Carpenter** (Indexing fixture), 189 Main St., New Britain, Conn.  
**Brandt, Randolph** (Packings), 66 Cortlandt St., New York.  
**Brass Foundry Co.** (Metal castings), 711-717 South Adams St., Peoria, Ill.  
**Brauer Acetylene Lighting Co.** (Acetylene gas generators), Marshalltown, Ia.  
**Braunsdorf, Geo. W.** (Felt washers), 430 E. 53d St., New York, N. Y.  
**Braunsdorf-Mueller Co.** (Small tools), Elizabeth, N. J.  
**Brawley, T. R.** (Felt goods), 275 20th St., Brooklyn, N. Y.  
**Brayman Water-Tight Drain Co.** (Drains), 133 W. 52nd St., New York.  
**Brazil Stamping & Mfg. Co.** (Humidifiers), Oakley and Oakdale Aves., Chicago, Ill.  
**Bre Mfg. Co.** (Closet seats), Hyde Park, District A, Boston, Mass.  
**Breakey, L. L.** (Gauge glass fittings), 712 W. State St., Marshall, Mich.  
**Breeze Metal Hose & Mfg. Co.** (Metallic tubing), 250-252 South St., Newark, N. J.  
**Bremen Mfg. Co.**, The (Gas pumping engines), Bremen, O.  
**Bremen Metal Stamping Co.** (Wrought washers), Logan, O.  
**Brennan, John, & Co., Inc.** (Boilers and tanks), 24th St. and M. C. Ry., Detroit, Mich.  
**Bretting, C. G., Mfg. Co.** (Engines, boilers, mach'y), Ashland, Wis.  
**Breuer, C. R., Smelting & Refining, The** (Ingots, Brass and Copper, Cincinnati, Ohio.  
**Brewer, H. & Co.** (Hoists), Tecumseh, Mich.  
**Brey & Krause Mfg. Co.** (Tubing, nuts, brackets, etc.), Front and Chew Sts., Allentown, Pa.  
**Bridge Tool Co.** (Wrenches), St. Louis, Mo.  
**Bridgeford Machine Tool Works** (Lathes), Winston Road, North Rochester, N. Y.  
**Bridgeport Belting Co.** (Leather belting), 183 John St., Bridgeport, Conn.  
**Bridgeport Brass Co.** (Brass and copper products), 233 Broadway, New York, N. Y.  
**Bridgeport Chain Co.** (Chains), Bridgeport, Conn.; 204 N. Wabash Av., Chicago, Ill.; Wells Fargo Bldg., San Francisco, Cal.; Dallas, Tex.  
**Bridgeport Hardware Mfg. Corp.** (Hardware and cutlery), Bridgeport, Conn.  
**Bridgeport Safety Emery Wheel Co.**, The (Grinding machines), Bridgeport, Conn.  
**Bridgeport Screw Co.**, Bridgeport, Conn.  
**Bridgeman Co.** (Valves and pipe fittings), 120 South 30th St., Philadelphia, Pa.; Newark, N. J.; Chester, Pa.  
**Brightman Furnace Co.** (Smokeless furnaces), 2570 Broadway, Cleveland, O.  
**Brightman Machine Co.**, The (Power transmission appliances), Quincy St. and C. & R. Ry., Cleveland, O.  
**Brindle, Ira** (Hose strainers), Waynesboro, Pa.  
**Bristol Brass Corporation** (Brass sheets, rods, etc.), Bristol, Conn.  
**Bristol Company, The** (Recording instruments), Waterbury, Conn.; 114 Liberty St., New York; 53 W. Jackson Blvd., Chicago; Pittsburgh.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Broad Gauge Iron Works, Inc.** (Floor traps and drains), 80 Portland St., Boston, Mass.  
**Brockton Mallet Co.** (Mallets), Brockton, Mass.  
**Broderick & Bascom Rope Co.** (Wire rope), 805-9 N. Main St., St. Louis, Mo.; 76 Warren St., New York; Seattle.  
**Brohard Co.**, The (Expansion bolts), 3d St. and Lehigh Ave., Philadelphia, Pa.  
**Bronze Metal Co.** (Babbitt metal), 30 Church St., Brooklyn, N. Y.; Detroit; Baltimore.  
**Brooklyn Alloys Co.** (Babbitt metal), Walton St., Brooklyn, N. Y.; Detroit; Baltimore.  
**Brooklyn Leather Belting Co.** (Leather belting), 42 S. 6th St., Brooklyn, N. Y.  
**Brooks Machine Co.**, The (Mach'y), Wichita, Kan.  
**Brooks, M. S. & Sons** (Cotters and keys), Chester, Conn.; 120 W. Lake St., Chicago, Ill.  
**Brooks Mfg. Co.** (Plumbing specialties), 2946 W. Lake St., Chicago, Ill.  
**Brookside Brass Foundry & Mfg. Co.**, The (Self-closing cocks and bibbs), 2315 Selzer Ave., S. W., Cleveland, O.  
**Bros, Wm., Boiler & Mfg. Co.** (Boilers and tanks), Minneapolis, Minn.  
**Brown, A. & F. Co.**, The (Pulleys, shafting, etc.), 79 Barclay, New York, N. Y.  
**Brown, Arthur S., Mfg. Co.** (cotton belting), Tilton, N. H.  
**Brown Clutch Co.**, The (Clutches and hoists), Sandusky, O.  
**Brown Co.** (Fibre pipe & fittings), Portland, Me.  
**Brown, D. P. & Co.** (Canvas stitched belting), 262-264 N. 4th St., Philadelphia, Pa.; 1438 Park Pl., Detroit; 307 Carson St. S. S., Pittsburgh, Pa.  
**Brown Engineering Co.** (Friction clutches), Reading, Pa.; 120 Liberty St., New York.  
**Brown, Horace A.** (pipe pushers), Ottumwa, Ia.  
**Brown Holsting Machinery Co.**, The (Holsting mach'y), 4403 St. Clair Ave., Cleveland, O.; Chicago, New Orleans, New York, Pittsburgh, San Francisco.  
**Brown Instrument Co.**, The (Edward Brown & Son) (Pyrometers, tachometers, etc.), Wayne and Windrim Aves., Philadelphia, Pa.; New York, Pittsburgh, Chicago, Detroit, Cleveland, Denver, St. Louis, Los Angeles, San Francisco, Montreal.  
**Brown, James I.**, successor to P. W. Koebig (Packings), 116 Broad St., New York, N. Y.  
**Brown, Lewis A. & Co.** (Baskets, brooms and brushes), 60 Commerce St., Boston, Mass.  
**Brown & Patterson** (Fans, forges, furnaces), 33 Marcy Ave., Brooklyn, N. Y.  
**Brown Portable Conveying Machinery Co.** (Portable elevators), 10 S. La Salle St., Chicago, Ill.  
**Brown, R. H. & Co.** (Drill chucks), Box 127, New Haven, Conn.

- ♦ Brown & Sharpe Mfg. Co. (Metal working machines and tools), Providence, R. I.; New York; Philadelphia; Rochester; Detroit; Hartford; Chicago; Pittsburgh; Syracuse.
- Brown, T. W., & Son (Calking tools), 616 Williams St., Chattanooga, Tenn.
- Browne, F. W., Co. (Wire brushes, etc.), Farmington, N. H.
- Brownell Co., The (Boilers, engines, heaters), Dayton, O.; 401 Bank of Commerce Bldg., St. Louis; 53 W. Jackson Blvd., Chicago.
- Browning Co., The (Cranes, steam shovels, etc.), E. 162d St. and Waterloo Rd., N.E., Cleveland, O.; 50 Church St., New York; Birmingham; 332 S. Mich., Chicago; San Francisco; Los Angeles; Portland; Seattle; Salt Lake City; Montreal.
- Browning-Sommer-Adams Co. (Traveling cranes), 17701 Lake Shore Blvd., Cleveland, O.
- Brubaker, W. L., & Bros. (Taps, dies, reamers), Millersburg, Pa.; 60 Church St., New York.
- Bruce & Cook (Metals), 188 Water St., New York.
- Bruce-Macbeth Engine Co., The (Gas engines), 2111 Center St., N. W., Cleveland; Oliver Bldg., Pittsburgh.
- Bruhn Mfg. Co., The (Tool chests), Hobart, Ind.
- Brunner Mfg. Co. (Air compressors), Utica, N. Y.; 419 1st Nat'l Bank Bldg., Cincinnati, O.
- Brunswick-Balke-Collider Co., The (Water closet seats), 623 S. Wabash, Chicago, Ill.
- Brunswick Refrigerating Co., The (Ice mach'y), New Brunswick, N. J.
- Bryan Mfg. Co., The (Wheelbarrows), Bryan, O.
- Bryant Chucking Grinder Co. (Metal working machines), Springfield, Vt.; 7217 St. Paul St., Detroit, Mich.
- Bryant Heater & Mfg. Co., The (Water and house heaters), 952 E. 72d St., Cleveland, O.; Toledo Cincinnati; Pittsburgh; Canton; Chicago; Columbus; Baltimore; Los Angeles; New York; San Francisco.
- Buchanan, A., Jr. (Soll pipe connections), 490 Summer Ave., Brooklyn, N. Y.
- Buchanan, C. G., Co. (Crushers and pulverizers), 90 West St., New York, N. Y.
- Bucher-Smith Co., The (Keyseaters), East Liverpool, Ohio.
- Buck Bros. (Carpenter's tools), Millbury, Mass.
- Buck, E. A., Co., Inc. (Oils and greases), Williamantic, Conn.
- Buckeye Belting & Supply Co. (Leather belting), 1560 West Third St., Cleveland, O.
- Buckeye Boiler Skimmer Co., The (Boiler cleaners, skimmers), Water Works Drive, Toledo, O.; 730 Peoples Gas Bldg., Chicago; 316 Miners Bank Bldg., Wilkes-Barre, Pa.
- Buckeye Drill & Lathe Co., The, Columbus, O.
- Buckeye Engine Co. (Steam and gas engines), Salem, O.
- Buckeye Iron & Brass Works (Steam-water-gas brass goods), Dayton, O.
- Buckeye Jack Mfg. Co., The (Lifting jacks), Alliance, O.
- Buckeye Mfg. Co. (Gas engines), 1801-09 Columbus Ave., Anderson, Ind.
- Buckeye Products Co., The (Foundry equipment), 919-21 W. 5th St., Cincinnati, O.
- Buckeye Pump & Mfg. Co., The (House pumps), 409-417 South 18th St., Columbus, O.
- Buckeye Traction Ditcher Co. (Ditching mach'y), Findlay, O.
- Buckeye Twist Drill Co. (Twist drills), Alliance, O.
- Buckeye Vise Co. (Vises and tools), 2050 W. 55th St., Cleveland, O.
- Buckley, Dement & Co. (Mailing lists, form letters), 1300 W. Jackson Blvd., Chicago, Ill.
- Buckley Rubber Co., J. W. (Mechanical rubber goods), 69 Warren St., New York, N. Y.
- Bucyrus Copper Kettle Works Co. (Copper kettles), Bucyrus, O.
- Buda Co., The (Railway track tools), Harvey, Ill.; 30 Church St., New York; Railway Exchange, St. Louis; Railway Exchange, Chicago.
- Budd Grate Co., The (Grates), 2013 E. Latterly St., Philadelphia, Pa.
- Buell Bros. (Radiator trucks), Fulton, N. Y.
- Buffalo Belt Dressing Co. (Belt dressing), 962 Kensington Ave., Buffalo, N. Y.
- Buffalo Belting Works (Leather belting), 137 Washington St., Buffalo, N. Y.
- Buffalo Bolt Co. (Bolts, screws, nuts), Buffalo, N. Y.; 1531 Monadnock Bldg., Chicago.
- Buffalo Chemical Fire Extinguisher Co. (Fire extinguishers), 65-67 Carroll St., Buffalo, N. Y.
- Buffalo Co-operative Stove Co. (Incinerators), Buffalo, N. Y.
- Buffalo Contractors' Plant Corp. (Lathes), 129 Erie St., Buffalo, N. Y.; 30 Church St., New York City.
- Buffalo Engine Co. (Gas engines), 12-30 Perry St., Buffalo, N. Y.
- Buffalo Forge Co. (Blowers, forges, engines, tools, etc.), Broadway and Mortimer Sts., Buffalo, N. Y.; Atlanta, Boston, Buffalo, Los Angeles, Chicago, Cincinnati, Cleveland, Denver, Des Moines, Detroit, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, Portland, St. Louis, Washington, D. C.
- Buffalo Foundry & Machine Co., The (Compressors, pumps, drying apparatus), 1541 Fillmore Ave., Buffalo, N. Y.; 17 Battery pl., New York.
- Buffalo Hoist & Derrick Co. (Cranes and hoists), 129 Erie St., Buffalo, N. Y.
- Buffalo Mfg. Co., The (Water coolers and filters), Buffalo, N. Y.
- Buffalo Metal Furniture Mfg. Co. (Factory furniture), 1511-13 Niagara St., Buffalo, N. Y.
- Buffalo Meter Co. (Water meters), 2911 Main St., Buffalo, N. Y.
- Buffalo Nipple & Machine Co., Inc. (Pipe nipples), 335-37 Glenwood Ave., Buffalo, N. Y.
- (See index to advertisement, pages 7, 8 and 9.)
- Buffalo Oil & Compound Co. (Oils and greases), 140-146 Mohican Ave., Buffalo, N. Y.
- Buffalo Packing & Rubber Corp. (Packings), 424 Chamber of Commerce, Buffalo, N. Y.
- Buffalo Pitts Co. (Steam engines), 4th & Carolina Sts., Buffalo, N. Y.
- Buffalo Refrigerating Machine Co. (Refrigerating mach'y), 39 Lafayette St., Brooklyn, N. Y.
- Buffalo Scale Co., Inc. (Scales), 1200 Niagara St., Buffalo, N. Y.
- Buffalo Specialty Co. (Belt dressing, oils, etc.), 375-377 Ellicott St., Buffalo, N. Y.
- Buffalo Steam Pump Co. (Steam pumps), 490 Broadway, Buffalo, N. Y.; New York; Chicago; Philadelphia; Pittsburgh; Charlotte, N. C.; Atlanta, Ga.; St. Louis; Boston; Los Angeles; Cleveland; Birmingham; Denver; New York; Cincinnati; Des Moines; Detroit; Minneapolis; New Orleans; Portland; Washington, D. C.
- Buffalo Wash Tray Works (Laundry trays), 597 Tonawanda St., Buffalo, N. Y.
- Buffalo Weaving & Belting Co. (Valves, packing, belting), 215 Chandler St., Buffalo, N. Y.; 258 Broadway, New York.
- Buffalo Wire Works Co. (Wire cloth, lockers, etc.), 483 Terrace, Buffalo, N. Y.; 9-11 South 7th St., Philadelphia.
- Buffum Tool Co. (Engineers' and mechanics' tools), Louisiana, Mo.
- Buhring Water Purifying Co. (Water filters), 68 Murray St., New York, N. Y.
- Bullders' Iron Foundry (Mach'y, water meters, etc.), 9 Coddling St., Providence, R. I.; Philadelphia, Chicago, New York, Atlanta, Dallas, San Francisco, Portland, Toronto.
- Bullders' Specialty Co. (Back water traps), 718 W. 63rd St., Chicago.
- (See index to advertisements, pages 7, 8 and 9.)
- Bull Tractor Co., The (Traction engines), 2629 University Ave., S.E., Minneapolis, Minn.
- Bullard, E. D. (Workmen's helmets), 268 Market St., San Francisco, Calif.
- Bullard Machine Tool Co. (Metal working machines), Broad and Allen Sts., Bridgeport, Conn.
- Bullard Specialty Co., The (Roof flanges), Tiffin, O.
- Bullock, C. K., Co. (Sprocket wheels, etc.), 1357-61 Ridge Ave., Philadelphia, Pa.
- Bullock Manufacturing Associates (Small tools), Springfield, Mass.
- Bumann Mfg. Co. (Hardware specialties), Litchfield, Ill.
- Bundy Steam Trap Co. (Steam traps), 39 Elm St., Nashua, N. H.
- Bunnell, Wm., Est. (plumbers' rubber specialties), 131 Worth St., New York.
- Bunting Brass & Bronze Co., The (Castings, bearings, bushings), Toledo, O.; 722 S. Mich. Ave., Chicago; 1362 E. 6th St., Cleveland; Grand Central Palace, New York; 198-2nd St., San Francisco.
- Burch Plow Works Co. (Car unloaders), Crestline, O.
- Burdett Mfg. Co. (Oxygen generators), 309 St. Johns Ct., Chicago; 224 Webster St., Oakland, Cal.
- Burgess-Norton Mfg. Co. (Small tools), Geneva, Ill.; 35 Walker St., New York.
- Burgess Soldering Furnace Co. (Plumbers' furnaces), Columbus, O.
- Burk, Alan R. H., Mfg. Co. (Copper sinks), 2260 N. Philip St., Philadelphia, Pa.
- Burke Furnace Co. (Grates, furnaces, stokers), 223 W. Austin Ave., Chicago, Ill.
- Burke Machine Tool Co. (Metal working machines), Connetquot, O.
- Burke, F. F. (Farriers' supplies), Damrell St., D. and Dorchester Ave., Boston, Mass.
- Burley Heater Co. (Heating boilers), Tyrone, Pa.
- Burlingame, A., Co. (Pumps and engines), Worcester, Mass.
- Burlingame, S. F. (engines), West Boylston St., Worcester, Mass.
- Burlington Brass Works (Plumbing brass goods), Burlington, Wis.
- Burman Specialty Co. (Laundry cocks), 1908 Lincoln St., N. E., Minneapolis, Minn.
- Burnall Fuel Saver Co. (Fuel economizers), North American Bldg., Chicago, Ill.
- Burnham Boilers Corporation (Boilers, etc.), Irvington, N. Y.; Mad. Ave. & 42nd St., New York; 810 Tremont Bldg., Boston; Widener Bldg., Philadelphia; Granite Bldg., Rochester; 15 E. Van Buren St., Chicago; Sweetland Bldg., Cleveland; Royal Bank Bldg., Toronto.



**Burnley Battery & Mfg. Co. (Solders), North East, Pa.**  
**Burns, F. Reed & Sons, Inc.,** 21 Jackson St., Brooklyn.  
**Burns & Bassick Co. (Grease cups), Bridgeport, Conn.**  
**Burr Oak Belting Co., The (Leather belting),** 1105-07 York St., Cincinnati, O.  
**Burr, John T., & Sons (Cold saws, key seaters),** 429 Kent Ave., Brooklyn, N. Y.  
**Burrell Belting Co. (Canvas belting),** 413 S. Hermitage Ave., Chicago, Ill.  
**Burroughs Tool Co. (Saws),** 87 Warren St., New York, N. Y.  
**Burrows Mfg. Co. (Boiler room appliances), York, Pa.**  
**Burrows, Wm., Mfg. Co., The (W. C. seats and tanks),** 32 Howard St., New York, N. Y.; 430-434 Kent Ave., Brooklyn, N. Y.  
**Burr's Damascus Tool Works (Molders' tools),** 528 Fort St. E., Detroit, Mich.  
**Burt Mfg. Co., The (Power plant appliances),** Akron, O.  
**Burton, A. J., & Son (Band saws),** Quincy, Mass.  
**Bury Compressor Co. (Pumps and compressors),** Erie, Pa.  
**Busby, C. W., & Co. (Stock tank heaters),** 121 N. 7th St., Washington, Iowa.  
**Busch, J. C., Co. (Sandblast equipment),** 136 Ferry St., Milwaukee, Wis.  
**Busch-Sulzer Bros., Diesel Engine Co. (Oil engines),** St. Louis, Mo.; 60 Broadway, New York, N. Y.; Rialto Bldg., San Francisco, Calif.  
**Buschle Mfg. Co., The (Pipe wrenches),** 1637 Central Ave., Cincinnati, O.  
**Bushnell, John S., & Co. (Power plant appliances),** 146 Liberty St., New York, N. Y.  
**Bushnell Pump Co. (Wooden pumps),** Bushnell, Ill.  
**Business Men's Paper Press Co. (Baling presses),** Wayland, Mich.  
**Buss Machine Works, The (Woodworking mach'y),** Holland, Mich.  
**Bussman Mfg. Co. (Electric fuses),** St. Louis, Mo.; New York, Chicago, San Francisco.  
**Butler Co., The (Windmills),** Butler, Ind.  
**Butler Electric Clutch Co. (Friction clutch),** Yonkers, N. Y.  
**Butler, F. G. (Acetylene gas generator),** Long Beach, Cal.  
**Butler Mfg. Co. (Steam condensers),** 1326 Grand Ave., Kansas City, Mo.; 628 Ninth St., Minneapolis, Minn.  
**Butler, Philip H., & Son Co. (Sinks, laundry trays),** 622 Somerville Ave., Somerville, Mass.  
**Butler, Thos. F. (Back water traps),** Lorain, Ohio.  
**Butterfield & Canty (Mach'y guards),** Logan, O.  
**Butterfield & Co., Division Union Twist Drill Co. (Thread cutting tools),** Derby Line, Vt.; 11 S. Clinton St., Chicago; 62 Reader St., New York; 220 King St. W., Toronto; 131 St. Paul St. West, Montreal.  
**Butterworth Supply Co. (Plumbers' sundries),** 4200 Kensington Ave., Frankford, Philadelphia, Pa.  
**Butts, Frank (Radiator fittings),** 6306 University Ave., Chicago, Ill.  
**Buzz Engineering Co. (Conveyors and pumps),** Second and Central Ave., Louisville, Ky.  
**Byers, A. M., Company (Wrought pipe),** 235 Water St., Pittsburgh, Pa.; 25 Sullivan St., New York; 101 Milk St., Boston; 332 S. Michigan Ave., Chicago; Houston, Los Angeles.  
**Byers, John F., Machine Co., The (Hoisting engines),** Ravenna, O.  
**Byrnes Belting Co. (Belting and hose),** 2109 Locust, St. Louis, Mo.; 1426 Grand Ave., Kansas City.

## C.

**C. C. C. Fire Hose Co. (Hose),** Canton Junction, Mass.; 301 Jenkins Arcade, Pittsburgh, Pa.; 380 W. Fayette St., Syracuse, N. Y.; 614 Delta Bldg., Los Angeles, Cal.; 58 W. Washington St., Chicago; 170 Summer St., Boston, Mass.  
**C. H. & E. Manufacturing Co., Inc. (Pumps),** 384 Clinton St., Milwaukee, Wis.  
**C. J. Mfg. Co. (Coal meters),** 3423 N. 5th St., Philadelphia, Pa.  
**C-M-B Wrench Co. (Wrenches),** Garwood, N. J.  
**Cable, Wm., Excelsior Wire Mfg. Co. (Wire),** 88 Ainslie St., Brooklyn, N. Y.  
**Cabot Co., The (Flush valves),** Springfield, Mass.  
**Cadillac Tool Co., The (Drilling machines),** Detroit, Mich.  
**Cadman, A. W., Mfg. Co. (Blow-off valves, etc.),** 2814 Smallman St., Pittsburgh, Pa.; 220 Broadway, New York.  
**Cady, C. N., Co. (Gas engines),** Canastota, N. Y.  
**Caille Perfection Motor Co. (Gas engines),** Second Blvd. & Amsterdam Ave., Detroit, Mich.  
**Calder, Geo. H. (Grinding tools),** Lancaster, Pa.  
**Caldwell, H. W., & Son Co. (Elevator and transmission mach'y),** 17th St. and Western Ave., Chicago, Ill.; 50 Church St., New York; 711 Main St., Dallas, Tex.  
**Caldwell Tool & Mfg. Co., Inc. (Sheet metal stampings),** 87 Warren St., New York.  
**Caldwell, W. E., Co., Inc. (Towers, tanks, mach'y),** 2370 Brook St., Louisville, Ky.

**Caledonia Bean Harvester Co. (Trucks),** Caledonia, N. Y.  
**California Belting & Leather Co. (Leather belting),** 165 N. Los Angeles St., Los Angeles, Calif.  
**California Belting & Supply Co. (Leather belting),** 1425 Mission St., San Francisco, Cal.  
**California Tanning Co. (Lace belting),** 1905 Shenandoah Ave., St. Louis, Mo.  
**Callahan, Cornelius, Co., The (Fire protection equipment),** 127 Purchase St., Boston, Mass.  
**Callahan, Geo., & Co. (Paints, cement, etc.),** 218 Front St., New York, N. Y.  
**Callahan, W. P., Co., The (Gas engines, mach'y),** 901 E. Third St., Dayton, O.  
**Cambria Steel Co. (Wire and nails),** Johnstown, Pa. (branches in all large cities).  
**Cambridge Iron Works (Boilers, tanks, etc.),** 32 Potter St., Cambridge, Mass.  
**Camden Copper Works, Inc. (Pans, evaporators),** 559 S. 2nd St., Camden, N. J.  
**Camden Forge Co. (Forgings),** Camden, N. J.  
**Camden Pottery Co. (Sanitary pottery),** Orchard and Mt. Vernon Sts., Camden, N. J.; 908, 103 Park Ave., New York.  
**Cameron, A. S., Steam Pump Works (Steam and power pumps),** 11 Broadway, New York, N. Y.; Commercial Trust Bldg., Philadelphia, Pa.; American Trust Bldg., Birmingham, Ala.; Farmington Nat'l Bank Bldg., Knoxville, Tenn.; Farmers Bank Bldg., Pittsburgh, Pa.; Williamson Bldg., Cleveland, O.; People's Gas Bldg., Chicago, Ill.; Providence Bldg., Duluth, Minn.; Postoffice Bldg., Houghton, Mich.; Union Oil Bldg., 701 Los Angeles, Cal.; 210 S. W. Temple St., Salt Lake City, Utah; 300 North Broadway, St. Louis, Mo.; Rialto Bldg., San Francisco, Cal.; Colman Bldg., Seattle, Wash. Agents in Boston, Mass.; El Paso, Tex.; Butte, Mont.; Denver, Col.; Juneau, Alaska.  
**Cameron, William (Pipe wrenches),** 417 Chapin St., Toledo, O.  
**Campbell, A. C. (Cotters and keys),** 42 State St., Waterbury, Conn.  
**Campbell-Hausfeld Co. (Furnaces),** Harrison, O.  
**Campbell, Lewis (Pipe nipples),** Boyertown, Pa.  
**Campbell Machinery Co.,** New York, N. Y.  
**Canada Carbide Sales Co. (Carbide),** 32 Church St., New York.  
**Canco's Mfg. Co. (Packings),** Garden and Bridge Sts., Bridesburg, Philadelphia, Pa.  
**Canedy-Otto Mfg. Co. (Forges, blowers, etc.),** Chicago Heights, Ill.; 1509 Caruth St., Dallas, Texas; Grand Central Palace, New York.  
**Canfield, H. O., Co. (Mechanical rubber goods),** Bridgeport, Conn.  
**Canfield, M. C., Sons Co. (Babbitt and solder),** 93 Wilsey St., Newark, N. J.  
**Canfield Rubber Co., The (Mechanical rubber goods),** Railroad Ave. and Garden St., Bridgeport, Conn. (See index to advertisement, pages 7, 8 and 9.)  
**Cann & Saul (Pipe hooks and straps),** 516 Commerce St., Philadelphia, Pa.  
**Cannon Oiler Co. (Pump oilers),** Keithsburg, Ill.; Monmouth, Ill.  
**Cantol Wax Company (Belt dressing),** Bloomington, Ind.  
**Canton Art Metal Co., The (Metal ceilings),** Canton, O.; 497 West St., New York, N. Y.; 201 Fifth St. N. E., Minneapolis; 1238 S. Michigan Ave., Chicago.  
**Canton Clothes Dryer Co. (Clothes dryers),** Canton, Ohio.  
**Canter Foundry & Machine Co., The (Portable cranes, sheet metal mach'y),** Canton, O.  
**Canton Grate Co. (Grates and oil filters),** 1711 Dillon Pl. N. E., Canton, O.  
**Canton Pneumatic Tool Co. (Pneumatic tools),** Canton, O.  
**Canton Supply Co. (Roof flanges),** 212 3d St., S. E., Canton, O.  
**Cantslip Mfg. Co., The (Rubber mats),** 1 Cedar St., New York, N. Y.  
**Capen Belting & Rubber Co. (Belting),** Main & Chestnut Sts., St. Louis, Mo.  
**Capitol Brass Works (Cocks, gauges, valves),** 2306 Franklin, Detroit, Mich. (See index to advertisement, pages 7, 8 and 9.)  
**Carbic Mfg. Co. (Contractors' lights),** Duluth, Minn.; Chicago, Boston, Philadelphia.  
**Carbondale Machine Co., The (Refrigerating mach'y),** Carbondale, Pa.  
**Carborundum Company, The (Grinding wheels and stones),** Niagara Falls, N. Y.; Boston; 26 W. Broadway, New York; Pittsburgh; 558 W. Wash., Chicago; Cincinnati; Milwaukee; Cleveland; Grand Rapids; Boston; Detroit; Philadelphia.  
**Card, S. W. Mfg. Co., Division of Union Twist Drill Co. (Taps, dies, etc.),** Mansfield, Mass.; 62 Reade St., New York.  
**Cardwell Machine Co., The (Mach'y and pumps),** 1900 E. Cary St., Richmond, Va.  
**Carey, Philip, Mfg. Co., The (Asbestos products),** Lockland, Cincinnati, O.; New York, Chicago, Toronto, Baltimore, Wheeling, St. Louis, Kansas City. Distributors in all large cities.

- Carey, W. W. Co. (Woodworking mach'y), Lowell, Mass.
- Carleton Co. (Blow torches), 170 Summer St., Boston.
- Carleton Coupling Co. (Hose couplings), Camden, Me.
- Carlin, John, H. Machine Co., Inc. (Hoists, pumps, etc.), 101 E. Laccock St., Pittsburgh, Pa.
- Carling Turbine Blower Co. (Blowers), Worcester, Mass.; 30 Church St., New York; 605 S. Dearborn St., Chicago; Guardian Bldg., Cleveland; Bourse Bldg., Philadelphia; Boston, Kansas City, Atlanta, Montreal.
- Carlton Machine Tool Co. (Drills), Spring Grove and Meeker Sts., Cincinnati, O.
- Carlton Machine Co., Inc. (Belt idlers), Sandusky and Laccock Sts., Syracuse, N. Y.
- ♦ Carnegie Steel Co. (Steel products), Pittsburgh, Pa.; Brown-Marx Bldg., Birmingham; 120 Franklin St., Boston; Ellicott Square Bldg., Buffalo; Com. Nat'l Bank Bldg., 208 S. La Salle, Chicago; Union Trust Bldg., Cincinnati; Rockefeller Bldg., Cleveland; First Nat'l Bank Bldg., Denver; Ford Bldg., Detroit; Maison Blanche, New Orleans; Hudson Terminal, New York; Penn. Bldg., Philadelphia; Carnegie Bldg., Pittsburgh; Third Nat'l Bank Bldg., St. Louis; Pioneer Bldg., St. Paul.
- Carolus Mfg. Co. (Bolt clippers), Sterling, Ill.
- Carpenter & Paterson (Pipe hangers), 14-16 India Sq., Boston, Mass.
- Carpenter, W. D., Co., Inc. (Liquid soap), 500 E. Water St., Syracuse, N. Y.
- Carpenter, The J. M., Tap & Die Co. (Taps, dies, etc.), Pawtucket, R. I.
- Carr, J. B., Co. (Chains), Troy, N. Y.
- Carrier Air Conditioning Co. of America (Humidifiers, etc.), Buffalo, N. Y.; 562 W. Washington Blvd., Chicago; 1308 Land Title Bldg., Philadelphia; 39 Cortlandt St., New York; Union Arcade, Pittsburgh; 1324 Chemical Bldg., St. Louis, Mo.; 176 Federal St., Boston, Mass.; 424 Higgins Bldg., Los Angeles, Cal.; 678 Rockefeller Bldg., Cleveland, O.
- Carroll Foundry & Machine Tool Co., The (Engines and cranes), Bucyrus, O.
- Carroll-Jameson Machine Tool Co., The (Lathes), Batavia, O.
- Carroll, P., & Sons (Range boilers, tanks, etc.), 1406-16 Fairmount Ave., Philadelphia, Pa.
- Carter & Hakes Machine Co., The (Milling machines, vises, etc.), Winsted, Conn.
- Carter Paint Co. (Paints), Liberty, Ind.
- Carter White Lead Co. (White lead), 12042 Peoria St., Chicago, Ill.
- Carton Belting Co., The (Cotton belting), Alston Dist., Boston; 1965 W. Pershing Rd., Chicago.
- Carver, C. R. Co. (Stamping presses), 20th and Clearfield Sts., Philadelphia, Pa.
- Carver Tool Works (Plumbers' tools), Spring Valley, N. Y.
- Cary Mfg. Co. (Box straps, etc.), Manhattan Bridge Plaza, Brooklyn, N. Y.; 314 Battery St., San Francisco, Cal.
- Case Crane & Engineering Co. (Cranes), Columbus, O.
- Case Plow Works Co., J. I. (Traction engines), Racine, Wis.
- Casey-Hedges Co., The (Boilers and plumbers' iron goods), Chattanooga, Tenn.; Chicago, New York, Cincinnati, New Orleans.
- Cash, A. W. Co. (Valves), 250 E. Wood St., Decatur, Ill.
- Cashman Tool Co. (Reamers), Waynesboro, Pa.
- Cashman & Benner (Closet augers), 1406 Vernon St., Harrisburg, Pa.
- Cassady-Fairbanks Mfg. Co. (Sink strainers and hardware), 6126 La Salle St., Chicago; 258 Broadway, New York.
- Cassco Bar-Metallic Packing Co. (Steam packing), 3559 Lincoln St., Chicago, Ill.
- \* Castle, A. M., Engineering Co. (Gas engines), La Crosse, Wis.
- Cave Welding & Mfg. Co. (Boilers), 32 Liberty St., Springfield, Mass.; Boston; Hartford; Holyoke; Bridgeport; Salem.
- Cedar Rapids Pump Co. (Well supplies), Cedar Rapids, Ia.
- Cedar Rapids Foundry & Machine Co., Inc. (Alligator shears, etc.), Cedar Rapids, Iowa.
- Celina Specialty Co. (Hose reels), Celina, O.
- Celite Products Co. (Insulation), Monadnock Bldg., Chicago; New York, Pittsburgh, Los Angeles, San Francisco.
- Cement Products Co. (Sewage system), Wilmington, N. C.; 39 Cortlandt St., New York; Oliver Bldg., Pittsburgh.
- Cement Tile Machinery Co., The (Mixers, concrete), Waterloo, Ia.
- Central Asbestos & Magnesia Co. (Asbestos coverings), 214 W. Grand Ave., Chicago, Ill.
- Central Belting Co. (Leather belting), 151 Lafayette St., New York, N. Y.
- Central Boiler Tank & Plate Iron Works (Boilers, tanks, furnaces), Millevale, Pa.
- Central Boiler Works (Boilers and tanks), 1113 Monroe Ave., Grand Rapids, Mich.
- Central Brass Mfg. Co. (Plumbers' brass goods), 6117-6207 Cedar Ave., Cleveland, O.
- Central Foundry Co. (Iron plumbing goods), 90 West St., New York, N. Y.; 333 N. May St., Chicago; San Francisco.
- Central Foundry Sup. Co. (Foundry equipment), 325 Reynolds Ave., Columbus, Ohio.
- Central Machine Co. (Governors and regulators), N. W. cor. 7th and Wood St., Philadelphia, Pa.
- Central Oil & Gas Stove Co. (Oil stoves), Gardner, Mass.; 116 Washington St., Boston.
- Central Radiator Co. (Radiators), Lansdale, Pa.; 90 West St., New York.
- Central Rope Mfg. Co. (Rope), 181-189 Scholes St., Brooklyn, N. Y.
- Central Sanitary Co., The (Plumbing supplies), Bellefonte, Pa.
- Central Specialty Mfg. Co. (Bathroom fittings), 503 S. Peoria St., Chicago, Ill.
- Central Station Steam Co. (Central heating equipment), 704-710 E. Woodbridge St., Detroit, Mich.; 902 First Nat'l Bank Bldg., Chicago, Ill.; 801 Metropolitan Life Bldg., Minneapolis, Minn.
- Central Supply Co. (Heating system), Worcester, Mass.
- Central Supply Co. (Pipe bends and coils), 312 Third St., S., Minneapolis, Minn.
- Central Tube Co. (Pipe and fittings), First Nat'l Bank Bldg., Pittsburgh; 122 S. Michigan Ave., Chicago; St. Louis, San Francisco, Philadelphia, Minneapolis, Louisville, Salt Lake City, St. Joseph, Mo.
- Centrifugal Fan Co. (Fans), 9 Seventeenth Ave., Newark, N. J.
- Centrifugal Pump Co. (House pumps), 434 Canal St., New York, N. Y.
- Century Electric Co. (Fans and motors), 19th and Olive Sts., St. Louis, New York, Boston, Chicago, Cincinnati, Cleveland, Des Moines, Detroit, Kansas City, Philadelphia, Pittsburgh, Rochester.
- Century Ventilating Co. (Ventilators), 424 E. 23d St., New York.
- Chadwick & Trefethen (Reamers), 32 Bow St., Portsmouth, N. H.
- Chadwick-Boston Lead Co. (Lead goods), 162 Congress St., Boston, Mass.
- Chaffee, Thomas K. Co. (Paints), Providence, R. I.
- Chain Belt Co. (Elevating and conveying mach'y etc.), Park and 16th Sts., viaduct, Milwaukee, Wis.; 134 S. La Salle St., Chicago.
- Chain Products Co., The (Chain), Cleveland, O.; Chicago, New York, St. Louis, San Francisco, St. Paul.
- Challenge Co. (Well supplies), Batavia, Ill.; Minneapolis; Kansas City, Omaha; Dallas, Tex.
- Challenge Machine Co., Inc. (Emery grinders), 5116 Springfield Ave., Philadelphia, Pa.
- Chalmers Pump & Mfg. Co. (Pumps), Lima, O.
- Chamberlain Co., The (Pipe cleaning compounds), 33 Terminal Way, Pittsburgh, Pa.; 109 Church St., Toronto, Ont.
- (See index to advertisement, pages 7, 8 and 9.)
- Chamberlain & Johnson (Gasfitters' cement), 74 Spring Garden St., Pittsburgh, Pa.
- Chambers Bros. Co. (Brick and clay mach'y), 52nd St., cor. Media St., Philadelphia, Pa.
- Chambersburg Engineering Co., The (Steam and hydraulic mach'y), Chambersburg, Pa.
- ♦ Champion Blower & Forge Co. (Forges, blowers, drills, etc.), Lancaster, Pa.
- Champion Compound Co. (Boiler compound), Lehigh Ave. and Mutter St., Philadelphia, Pa.
- Champion Machinery Co. (Bakers' mach'y), Joliet, Ill.
- Champion Pneumatic Machinery Co. (Air compressors), 1402 S. Michigan Blvd., Chicago.
- Champion Rivet Co., The (Rivets and pins), Harvard Ave. and 108th St., Cleveland, O.
- Champion Foundry & Machine Co., The (Foundry mach'y), 2419 W. 14th St., Chicago, Ill.
- Champion Tool Co. (Blacksmiths' tools), Meadville, Pa.
- Champion Tool Works Co. (Lathes), 4955 Spring Grove Ave., Cincinnati, O.
- Champion Wrench Mfg. Co. (Wrenches), 928 W. Huron St., Chicago, Ill.
- (See index to advertisements, pages 7, 8 and 9.)
- Chandler Co., The (Name plates), Napier St., Springfield, Mass.
- Chandler Heater Co. (Boilers and radiators), Cedar Rapids, Ia.
- Chandler Pump Co. (Well supplies), Cedar Rapids, Ia.; Kansas City, Mo.
- Chandler & Taylor Co. (Boilers and engines), S. Addison and Big Four Ry., Indianapolis, Ind.
- Channon Mfg. Co. (Factory clothes hangers), 227 W. Erie St., Chicago.
- Chapin-Stephens Co., The (Rules, planes, levels, etc.), Pine Meadow, Conn.; 126 Chambers St., New York.
- Chaplin-Fulton Mfg. Co., The (Steam specialties), 38-34 Penn. Ave., Pittsburgh, Pa.
- Chapin-Skelton Corporation (Burring fixture), 406 Ash St., Syracuse, N. Y.
- Chapman Engineering Co. (Gas producers), Mount Vernon, O.; 11 Broadway, New York; 1323 Oliver Bldg., Pittsburgh.
- Chapman, H. L. (Gas engines), Marcellus, Mich.
- Chapman's, T. M., Sons Co. (Saw-mill and woodworking mach'y), Old Town, Me.

- Chapman Valve Mfg. Co.** (Valves and hydrants), Indian Orchard, Mass.; 141 High St., Boston; 180 La Fayette St., New York; 1011 Filbert St., Philadelphia; 111 W. Washington St., Chicago; Candler Bldg., Atlanta.
- Chard & Howe** (Pipe coil cleaner), 250 Front St., New York, N. Y.
- Chard Lathe Co.** (Lathes), Newcastle, Ind.
- Charleston Lead Works, The** (Lead pipe), Charleston, S. C.
- ◆ **Charlotte Leather Belting Co.** (Leather belting), Charlotte, N. C.; 9 S. Clinton St., Chicago, Ill.; 716 Superior, N. W., Cleveland.
- Charlotte Pipe & Foundry Co.** (Soll pipe), Charlotte, N. C.
- Charter Gas Engine Co.** (Gas engines), Sterling, Ill. Phoenix, Arizona.
- Chase Foundry & Mfg. Co.** (Cars, trucks, etc.), Columbus, O.
- Chase Machine Co., The** (Hoisting engines), 2313 Elm St., N. W., Cleveland, O.
- Chase Rolling Mill Co.** (Brass and copper), 236 Grand St., Waterbury, Conn.; 200 Fifth Ave., New York; Stephen Girard Bldg., Philadelphia; 310 Engineers' Bldg., Cleveland; Chamber of Com., Rochester; 79 Milk St., Boston; 700 Tribune Bldg., Chicago; 910 Balfour Bldg., San Francisco.
- Chase Turbine Mfg. Co., The** (Saw mill mach'y), Orange, Mass.; 407 Press Bldg., Portland, Me.
- Chattanooga Machinery Co.** (Key seaters), Chattanooga, Tenn.
- Chattanooga Saw Works, The** (Saws), 112 Williams St., Chattanooga, Tenn.
- Chattanooga Stamping & Enameling Co.** (Enameling), Chattanooga, Tenn.
- Chattanooga Wheelbarrow Co.** (Wheelbarrows), Chattanooga, Tenn.; 44 Whitehall St., New York.
- Chausse Mfg. Co.** (Paving heaters), 103 Humber Bldg., Highland Park, Mich.; 11410 Jefferson Ave., Detroit, Mich.
- Chelsea File Works, Inc., The** (Files), Norwich, Conn.
- Chelsea Oil & Supply Co.** (Lubricants), 17 Battery Pl., New York, N. Y.
- Chemical Products Co.** (Cleaners), 116 Christopher St., New York, N. Y.
- Chemo-Mechanical Water Improvement Co.**, 63rd and Woodland Ave., Philadelphia, Pa.
- Cheney, Henry, Hammer Co.** (Hand hammers), Little Falls, N. Y.; Boston, Chicago, Dayton, Denver, Kansas City, Los Angeles, New Orleans, New York, Pittsburgh, Portland, San Francisco, Richmond, Washington, D. C.; Montreal.
- Cheney, S. & Son** (Tool grinders), Manlius, N. Y.
- Cherry Chemical Co., The** (Boiler compounds), 1018 Callowhill St., Philadelphia, Pa.
- Chesapeake Belting Co., The** (Cotton belting), 823 Homewood Ave., Baltimore, Md.
- Chesterfield Mfg. Co.** (Wheelbarrows), 70 Warren St., New York.
- Chesterton, A. W., Co.** (Packings, etc.), 64 India, Boston, Mass.
- Chicago Asbestos Mfg. Co.** (Asbestos covering), 1909-17 W. 22nd St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Chicago Automatic Machine Co.** (Screw machines), 400 N. Oaklev Blvd., Chicago, Ill.
- Chicago Baling Press Mfg. Co.** (Paper balers), 4842 W. Kinzie St., Chicago, Ill.
- ◆ **Chicago Belting Co.** (Leather belting), 119 N. Green St., Chicago, Ill.; 127 Water St., New York; 1313 W. 6th St., Cleveland; 111 Market St., Pittsburgh, Pa.; 1242 18th St., Rockford, Ill.; 200 Tchoupitoulas St., New Orleans; 126 Pine St., San Francisco; 304-6 E. 3rd St., Los Angeles; 94 First St., Portland; 528 First Ave., So. Seattle; 262 Palace Theatre Bldg., Milwaukee; 30 South St., Boston, Mass.
- Chicago Conveyor Co.** (Gravity conveyors), 2412-18 W. 22d St., Chicago, Ill.
- Chicago Crucible Co.** (Crucibles), 175 W. Jackson Blvd., Chicago.
- Chicago Down Draft Furnace Co.** (Furnaces), 115 S. Clinton St., Chicago, Ill.
- Chicago Dryer Co.** (Laundry dryers), 2210 N. Crawford Ave., Chicago, Ill.
- Chicago Engineer Supply Co.** (Engineers' supplies), 68 W. Lake St., Chicago, Ill.
- Chicago Expansion Bolt Co.** (Expansion bolts), 324 W. Washington St., Chicago, Ill.
- Chicago Eye Shield Co.** (Eye protectors), 2300 Warren Ave., Chicago, Ill.
- Chicago Faucet Co.** (Plumbers' brass goods, etc.), 2712 N. Crawford Ave., Chicago, Ill.
- Chicago File & Rasp Co.** (Files and rasps), Grand Haven, Mich.
- ◆ **Chicago Flexible Shaft Co.** (Gas furnaces, etc.), 5600 West Roosevelt Road, Chicago, Ill.
- Chicago Foundry Co.** (Soll pipe), 2021 N. Major Ave., Chicago, Ill.
- Chicago Fuse Mfg. Co.** (Fuses), Laffin and 15th St., Chicago, Ill.; 73 Barclay St., New York.
- Chicago Granite Mfg. Co.** (Laundry trays), 3619 Wall St., Chicago, Ill.; Cincinnati, Omaha.  
(See index to advertisement, pages 7, 8 and 9.)
- Chicago Mfg. & Distributing Co.** (Wrenches), 411 S. Sangamon St., Chicago, Ill.
- ◆ **Chicago Nipple Mfg. Co.** (Wrought iron nipples), 1966 Southport Ave., Chicago, Ill.; 43 Exchange Pl., New York; Richmond, Va.
- Chicago Nut Co.** (Nuts and bolts), 2513 W. 20th St., Chicago, Ill.; 58 Warren St., New York.
- Chicago Pipe Co.** (Cast iron plumbing goods), 836-40 W. Kinzie St., Chicago, Ill.
- Chicago Pneumatic Tool Co.** (Pneumatic tools), 6 E. 44th St., New York; 1925 N. 5th Ave., Birmingham; 182 High St., Boston; 208 Franklin St., Buffalo; 300 N. Michigan Ave., Chicago; Pearl and Vine Sts., Cincinnati; 109 St. Clair Ave., N. E., Cleveland; 401 E. Larned St., Detroit; 303 San Francisco St., El Paso; 12th and Cranberry Sts., Erie; 6 13th St., Franklin, Pa.; 407 Carter Bldg., Houston; 308 Wall St., Joplin, Mo.; 307 E. 3rd St., Los Angeles; 5th Ave. and 5th St., S., Minneapolis; 853 Carondelet St., New Orleans; 1740 Market St., Philadelphia; 12 Wood St., Pittsburg; 307 Railway Exchange, Portland; 1004 Mutual Bldg., Richmond; 117 W. 2nd St., S., Salt Lake City; 119 Jackson St., Seattle; 813 Hempstead St., St. Louis; 175 First St., San Francisco.
- Chicago Pottery Co.** (Closet bowls and tanks), 1924 Clybourn Ave., Chicago, Ill.
- ◆ **Chicago Pulley & Shafting Co.** (Power transmission equipment), 40 S. Clinton St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Chicago Pump Co., The** (Electric pumps), 2336 Wolfram St., Chicago, Ill.; 220 Broadway, New York.
- ◆ **Chicago Rawhide Mfg. Co.** (Belting, packing, gears, etc.), 1301 Elston Ave., Chicago, Ill.; 204 N. Calvert St., Baltimore; 109 Broad St., New York City.
- Chicago Rivet Specialty Co.** (Rivets), 2620 W. 48th St., Chicago.
- Chicago Screw Co., The** (Bolts, screws, nuts), Fillmore St. and Homan Ave., Chicago, Ill.
- Chicago Solder Co.** (Solder), 4201 Wrightwood Ave., Chicago, Ill.
- Chicago Steel Foundry Co.** (Wire rope sockets), 3720 S. Kedzie Ave., Chicago, Ill.
- Chicago Tube & Iron Co.** (Boiler tubes), 1469 S. Jefferson St., Chicago.
- Chicago Tubing & Braiding Co.** (Gas tubing), 216 N. Clinton St., Chicago, Ill.
- Chicago Waste Co.** (Cotton and woolen waste), 1210 Elston Ave., Chicago, Ill.
- Chicago Watchman's Clock Works** (Watchmen's clocks), 1526 S. Wabash Ave., Chicago, Ill.; 9 Church St., New York; 1421 Connecticut St., Los Angeles.
- Chicago Well Supply Co.** (Well supplies), 228-232 W. Ontario St., Chicago, Ill.
- Chicago Wheel Mfg. Co.** (Grinding wheels), 1101 W. Monroe St., Chicago, Ill.
- Chicago Spring Butt Co.** (Closet seat hinges), 1500 Carroll Ave., Chicago, Ill.; 23 Warren St., New York.
- Chicago Wire Chair Co., The** (Factory stools), 619 N. La Salle St., Chicago.
- Childs, O. J., Co., Inc.** (Fire extinguishers), 140 Liberty St., Utica, N. Y.
- Chippewa Pump Co.** (Pumps), Wagner St., Chippewa Falls, Wis.; 201 E. Ontario St., Chicago, Ill.
- ◆ **Chisholm & Moore Mfg. Co., The** (Hoists and trolleys), 5046 Lakeside Ave., N.E., Cleveland, O.; 30 Church St., New York; 554 Peoples Gas Bldg., Chicago, Ill.; Henry W. Oliver Bldg., Pittsburgh, Pa.
- Christiana Machine Co.** (Power transmission mach'y), Christiana, Pa.
- Christoffels, A., Sons** (Flue cleaners), 277-279 Eldert St., Brooklyn, N. Y.
- Christopher, Geo. C. & Son** (Concrete machinery), Wichita, Kan.
- Church Expansion Bolt Co., Isaac** (Expansion bolts), East Norwalk, Conn.
- Church, C. F., Mfg. Co.** (White bathroom furnishings), Holyoke, Mass.; 5312 Harper Ave., Chicago; 207 E. 43d St., New York; Monadnock Bldg., San Francisco; Berghoff Bldg., Bayonne, N. J.; 1244 Halsey St., Brooklyn; 74 Summer St., Stamford Ct., 923 Nicollet Ave., Minneapolis; Stephen Girard Bldg., Philadelphia.
- Church, Stephen B.,** (Deep well pumps), Seymour, Conn.; 66 High St., Boston.
- Chuse Engine & Mfg. Co.** (Steam engines), Mattoon, Ill.
- Cincinnati Automatic Machine Co.** (Milling machines), Oakley, Cincinnati, O.
- Cincinnati Ball Crank Co., The** (Machine handles), North St., Oakley, Cincinnati, O.
- Cincinnati Bickford Tool Co.** (Machine tools), 3220 South St., Oakley, Cincinnati, O.
- Cincinnati Electrical Tool Co.** (Drills and grinders), 1501-5 Freeman Ave., Cincinnati, O.
- Cincinnati Gasket & Packing Co.** (Gaskets and packings), 1546 Elm St., Cincinnati, O.

- Cincinnati Gear Co., The (Gears), 1825-41 Reading Rd., Cincinnati, Ohio.
- Cincinnati Gear Cutting Machine Co., The (Gear cutters), Elam St. and Garrard Ave., Cincinnati, O.
- Cincinnati Glue Heater Co. (Glue heaters), Cincinnati, Ohio.
- Cincinnati Grinder Co., The (Grinding machines), Marburg Ave. & South St., Oakley, Cincinnati, O.
- Cincinnati Lathe & Tool Co. (Lathes), 3207 North St., Oakley, Cincinnati, O.
- Cincinnati Mfg. Co. (Bronze, iron and wire work), 1243 W. 6th St., Cincinnati, O.
- Cincinnati Milling Machine Co. (Millers and grinders), Columbia Rd. and South St., Oakley, Cincinnati, O.
- Cincinnati Oil Works Co., The (Lubricants), 525 Eggleston Ave., Cincinnati, O.
- Cincinnati Planer Co., The (Machine tools), South St., Oakley, Cincinnati, O.
- Cincinnati Refrigerating Machinery Co. (Refrigerating machines), Cincinnati, O.
- ♦ Cincinnati Rubber Mfg. Co., The (Mechanical rubber goods), Franklin Ave. and E. & O. R. R. Norwood, Cincinnati, O.; New York, Boston, Minneapolis, Kansas City.
- Cincinnati Screw Co. (Machine screws), Twilight, Ohio.
- Cincinnati Shaper Co. (Shapers), Garrard and Elam Sts., Camp Washington, Cincinnati, O.
- Cincinnati Specialty Mfg. Co., Inc. (Electric light reels), 1913-21 Powers St., Cincinnati, O.
- Cincinnati Tool Co., The (Hand tools), Norwood, O.
- Cincinnati Vise Co. (Drill press vises), Station H, Cincinnati, Ohio.
- Cisco Machine Tool Co. (Lathes), Elmore & C., H. & D. Ry., Cincinnati, Ohio.
- City Iron Works & Machine Co. (Grease cups), 522 & Delaware Ave., Philadelphia, Pa.
- Clafin, C. A., Co. (Flue cleaners, etc.), Boston, Mass.
- Clancy, J. E. (Hose menders), 1010-1020 W. Belden Ave., Syracuse, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Clapp, Harry D. B., & Co. (Waste), 824 N. American St., Philadelphia, Pa.
- Clarage Fan Co. (Blowers), Kalamazoo, Mich.; Chicago, Cleveland, New York, Boston, Minneapolis, Detroit, Pittsburgh, Philadelphia, Rochester, Los Angeles, St. Louis.
- Clark-Aiken Co. (Paper mill machinery), Lee, Mass.
- ♦ Clark Bros. Bolt Co. (Bolts, screws), Milldale, Conn.
- Clark Bros. Company (Sawmill mach'y), Olean, N. Y.
- Clark Cadle Harmond Corp. (Soldering furnaces), Rochester, N. Y.
- Clark Cast Steel Cement Co. (Iron cement), Shelton, Conn.
- Clark Co., The (Iron and steel nipples), West Newton, Pa.
- Clark Dust Collecting Co. (Dust collecting apparatus), 343 S. Dearborn St., Chicago, Ill.
- Clark Engine & Boiler Co. (Boilers and engines), Kalamazoo, Mich.
- Clark Equipment Co. (Drills, reamers, etc.), Buchanan, Mich.; 514 Marquette Bldg., Detroit; 339 2nd Ave., Pittsburgh.
- Clark Flexible Metallic Packing Co. (Packings), 71 Kennebec St., Portland, Me.
- Clark, Geo. M., & Co., Division, American Stove Co. (Gas stoves), 179 N. Michigan Ave., Chicago, Ill.; 209 W. 43rd St., New York; 86, 3rd st., cor. Mission, San Francisco.
- ♦ Clark, Geo. P., Co., The (Trucks and casters), Windsor Locks, Conn.; 116 Nassau St., New York.
- Clark, Henry N., Co. (Cast iron sinks), 56-58 Union St., Boston, Mass.
- Clark, H. W., Co. (Meter boxes), 1711 Broadway, Mattoon, Ill.
- ♦ Clark, James, Jr., Electric Co. (Electric tools), 520 W. Main St., Louisville, Ky.; 201 Machinery Hall, Chicago; 1307 1st Nat. Bk. Bldg., Pittsburgh; 531 Parkway Boul., Philadelphia.
- Clark, J. M. (Steam engines), Whitestone, L. I., N. Y.
- Clark Machinery Co. (Boring tools), 1302 Ontario St., Cleveland, O.
- Clarke, Robert, Inc. (Lead traps), 98-100 Schermerhorn St., Brooklyn, N. Y.
- Clarke, F. H. Mfg. Co. (Concrete mixers), 107-21 Superior Ave., Cleveland, O.
- Clarke's Saw & Machine works (Saw blades), 66 Alpine St., Newark, N. J.
- Clarksville Fdry. & Machine Co. (Plumbing specialties), Clarksville, Tenn.
- Clay Engine Mfg. Co. (Gas engines), 864 E. 72d St., Cleveland, O.; New York, N. Y.
- Clay, John M. (Hose fittings), 1320 Ridge Ave., Philadelphia, Pa.
- Clayton Air Compressor Works (Engines, compressors, etc.), 115 Broadway, New York, N. Y. Branches same as for Laidlaw-Dunn-Gordon Co.
- ♦ Clayton & Lambert Mfg. Co. (Fire pots and torches), Detroit, Mich.
- ♦ Clemson Bros., Inc. (Saws), Middletown, N. Y.
- Clemons Knife Co. (Hack saws), Woburn, Mass.
- Cleenden Bros., Inc. (Brass and copper goods), 108 South St., Baltimore, Md.; 220 Broadway, New York, N. Y.
- Clenzall Machine Co. of America (Barrel trucks), 1326 S. Kingshighway, St. Louis, Mo.
- Cleveland Abrasive Wheel Co. (Abrasives), 2629 E. 25th St., Cleveland, O.
- Cleveland Automatic Machine Co. (Lathes), 2269 E. 65th St., Cleveland, O.
- Cleveland Block Co. (Tackle blocks), 1173 W. 11th St., N. W., Cleveland, O.
- Cleveland Blow Pipe & Mfg. Co. (Dust collectors), 8950 Kinsman Road, Cleveland, O.
- Cleveland Brass Mfg. Co., The (Plumbers' brass goods), 4606-08 Hamilton St., Cleveland, O.
- Cleveland Brass & Copper Mills, Inc. (Sheets and rods), Euclid, O.; 825 Dime Bank Bldg., Detroit; 657 Railway Ex., Chicago; 106 N. 3rd St., St. Louis.
- Cleveland Breathing Machine Co., The (Pulmotors), 1102 Hamilton Ave., N. E., Cleveland, O.
- Cleveland Chain & Mfg. Co. (Chain), Cleveland, O.
- Cleveland Crane & Engineering Co. (Cranes), Wickliffe, O.; 50 Church St., New York; First Natl. Bank Bldg., Pittsburgh.
- Cleveland Faucet Co. of Pittsburgh, The (Brass goods, pumps, etc.), 706 Frankfort Ave., N. W., Cleveland, O.; 412 3d Ave., Pittsburgh.
- Cleveland Feed Water Regulator Co., The (Regulators and boilers), Tennyson Rd., Cleveland, Ohio.
- Cleveland Flue Cleaner Mfg. Co. (Emery wheel dressers), 321 Frankfort Ave., N. W., Cleveland.
- Cleveland Flush Meter Co. (Flush valves), 118 Noble Court, Cleveland, O.
- Cleveland Gas Burner & Appliance Co. (Natural gas burners), 952-54 Leader-News Bldg., Cleveland, O.
- Cleveland Gas Meter Co. (Gas meters), 2180 E. 65th St., Cleveland, O.
- Cleveland Heater Co. (Water heaters), 1900 W. 112th and Locust Ave., Cleveland, O.
- Cleveland Instrument Co., Cleveland, O.
- Cleveland Knife & Forge Co. (Machine knives), 1960 W. 114th St., Cleveland, Ohio; 519 Wood St., Pittsburgh.
- Cleveland Lathe & Machinery Co. (Machines, drilling), Whitney Power Bldg., Cleveland, O.
- Cleveland Machine Tool Co. (Machine tools), 18511 Euclid Ave., Cleveland, O.; 1752 Woolworth Bldg., New York; 435 Stock Exchange Bldg., Chicago, Ill.; 705 Dime Bank Bldg., Detroit, Mich.; 316 Terminal Bldg., Indianapolis.
- Cleveland Machinery Co. (Sawmill specialties), Cleveland, Tenn.
- Cleveland Metal Products Co. (Oil heaters), 7301 Platt Ave., Cleveland, Ohio.
- Cleveland National Machine Co. (Tool holders), 1354 West 70th St., Cleveland, O.
- Cleveland Planer Co., The (Planers and grinders), 3148 Superior Ave., Cleveland, O.
- Cleveland Pneumatic Tool Co. (Pneumatic tools), 3734 E. 78th St., Cleveland, O.; New York, Boston, Chicago, Philadelphia, Pittsburgh, St. Louis, San Francisco, Montreal, Quebec.
- Cleveland Punch & Shear Works Co. (Punches, shears, etc.), 3917 St. Clair Ave., N.E., Cleveland, O.; 1307 1st Nat. Bank Bldg., Pittsburgh, Pa.; 332 S. Michigan Ave., Chicago, Ill.; 50 Church St., New York, N. Y.; 321 Bulletin Bldg., Philadelphia, Pa.
- Cleveland Rock Drill Co. (Pneumatic tools), 3734 E. 78th St., Cleveland, O.; 30 Church St., New York; 570 Gas & Electric Bldg., Denver; 515 Mission St., San Francisco.
- Cleveland Steel Barrel Co. (Steel barrels), 9612 Meech Ave., S. E., Cleveland, Ohio; Chicago, Kansas City, New Orleans, Philadelphia, San Francisco.
- Cleveland Stone Co., The (Grinding machine), Union Bldg., Cleveland, O.; 283 Front St., New York, N. Y.
- Cleveland Tap & Machine Mfg. Co., (Taps) 1736 E. 22nd St., Cleveland, O.
- ♦ Cleveland Twist Drill Co. (Drills, reamers, etc.), Lakeside Ave., N.E. and E. 49th St., Cleveland, O.; 30 Reade St., New York; 9 N. Jefferson St., Chicago.  
(See index to advertisement, pages 7, 8 and 9.)
- Cleveland Wire Cloth & Mfg. Co., The (Wire cloth, screens, etc.), 3573-83 East 78th St., Cleveland, Ohio.
- Cleveland Wire Division National Lamp Works of General Electric Co., 1814 E. 45th St., Cleveland, Ohio.
- Cleveland Wire Spring Co., The (Factory furniture), Howard & E. 49th St., Cleveland, O.
- Cleveland Wrought Products Co. (Washers, nuts, etc.), 3590 W. 58th St., Cleveland, O.
- Cliff & Guilbert Co. (Fire protection supplies), 460 W. Broadway, New York, N. Y.
- Clifton-Pratt Co. (Cleaners, vacuum and power), Cincinnati, O.
- Climax Smoke Preventer Co., Inc. (Smoke preventers), 261 Franklin St., Boston, Mass.
- Clincher Clamp Co. (Hose clamps), Battle Creek, Mich.
- Cling-Surface Co. (Belt dressing), 1032-48 Niagara St., Buffalo, N. Y.; 39-41 Cortlandt St., New York.
- ♦ Clinton Mfg. Co. (Packings), 83 Grand Ave., Brooklyn, N. Y.
- ♦ Clipper Belt Lacer Co. (Belt lacing machines), 974-1042 Front Ave., N. W., Grand Rapids, Mich.

- Clipper Tool Co. (Saw vises), 284 Mills St., Buffalo, N. Y.
- Clizbe Bros. Mfg. Co. (Grinding mach'y), Plymouth, Ind.; 149 Church St., New York.
- Closet Seat Bumper Co. (Rubber bumpers), Cincinnati, O.
- Clough, R. M. (Gear and milling cutters), Meriden, Conn.
- Clover Leaf Machine Co. (Hoists), South Bend, Ind.
- Clover Mfg. Co. (Grinding compounds), Norwalk, Conn.; Chicago, San Francisco.
- Clow, James E., & Sons (Plumbers' supplies), 534-546 S. Franklin, Chicago, Ill.; New York, San Francisco, Detroit, St. Louis, Minneapolis, Milwaukee, Philadelphia, Pittsburgh.
- Clyde Iron Works (Logging mach'y), Duluth, Minn.; New York, Chicago, New Orleans, Savannah.
- Coates Clipper Mfg. Co. (Electric tools), 237 Chandler St., Worcester, Mass.
- Cobb & Drew, Inc. (Rivets and cotters), Plymouth, Mass.
- Coburn Trolley Track Mfg. Co., The (Tramways and trolleys), Holyoke, Mass.; 220 N. Wabash Ave., Chicago; 90 West St., New York.
- Cochise Machine Co. (Rock drills), 273 W. 115th St., Los Angeles, Cal.; 107 E. Broadway, Butte, Goldfield, Nev.; Salt Lake City; Coleman Docks, Seattle, Wash.; 139 Townsend St., San Francisco; 5 So. Stevens St., Spokane, Wash.; Prescott, Ariz.
- Cochran, Druggan & Co. (Sanitary earthenware), Trenton, N. J.
- Cochrane, J. A., Brass Mfg. Co. (Plumbing Supplies), 1390 East 41st St., Cleveland, O.
- Cochrane Bly Co. (Metal working mach'y), Rochester, N. Y.
- Cochrane, H. S. B. W. Corp. (Heaters, etc.), 17th St. below Allegheny, Philadelphia, Pa.; Boston, New York, Pittsburgh, Cleveland, Indianapolis, Cincinnati, Detroit, Chicago, St. Louis, Kansas City, Salt Lake City, Denver, Seattle, San Francisco, New Orleans, Birmingham, Toronto, Montreal, Winnipeg, Baltimore.
- Codd, E. J., Co. (Pumps, engines, mach'y), 700-3 S. Caroline St., Baltimore, Md.
- Codd Tank & Specialty Co., The (Boiler cement), 117 S. Hanover St., Baltimore, Md.
- Codman, F. L. & J. C. Co. (Electro-plating supplies), 15 Elkins St., South Boston, Mass.
- Coe & Brown Co. (Leather belting), 204 George St., New Haven, Conn.
- Coe Mfg. Co., The (Woodworking mach'y), Painesville, O.
- Coes Wrench Co. (Wrenches), 1 Coes Sq., Worcester, Mass.
- Coffin Valve Co. (Valves and hydrants), Neponset, Boston, Mass.
- Cogsdill Mfg. Co. (Center drills), 5132 Grand River Ave., Detroit, Mich.
- Cohoes Rolling Mill Co. (Iron pipe), Cohoes, N. Y.
- Cokel Stoker Co. (Stokers), 1029 N. Clark St., Chicago; 1038 Ivanhoe Road, Cleveland, O.  
(See index to advertisement, pages 7, 8 and 9.)
- Colburn Machine Tool Co. (Metal working mach'y), 1038 Ivanhoe Rd., Cleveland, O.
- Coldwell-Wilcox Co. (Sluice gates, valves, etc.), Newburgh, N. Y.
- Colebrook, W. H., & Sons (Cements, paints, etc.), 1419-21 Orange St., Syracuse, N. Y.
- Coleman, Allan J. (Plumbers' specialties), 208 N. Wabash Ave., Chicago, Ill.; 178 5th Ave., New York, N. Y.
- Coleman Gas Works Mfg. Co. (Acetylene gas generators), Cincinnati, O.
- Colladay Machine Works (Woodworking mach'y), 624-26 Race St., Philadelphia, Pa.
- Colles Heater & Specialty Co. (Power plant appliances), 1535 Lytton Bldg., Chicago, Ill.
- ✦ Collis Company, The (Metal and wire goods), Clinton, Iowa.
- Collins Iron Works (Steel tanks), Phelps, N. Y.
- Collins Metallic Packing Co. (Packings and lubricators), 56-58 N. 2d, Philadelphia, Pa.
- Collmer Bros. (Pipe cutters, etc.), 107 Lincoln Way E., South Bend, Ind.; 28-30 W. Broadway, New York, N. Y.; 80-82 N. 5th St., Portland, Ore.
- Colonial Co., The (Sanitary pottery), East Liverpool, O.
- Colonial File Co. (Files), Boston, Mass.
- Colonial Mfg. Co. (Gas burners), Chattanooga, Tenn.
- Colossus Company, Inc. (Packing), 115½ Texas St., Shreveport, La.; Seattle.
- Colson, H. H. (Grease gun loaders), 3225 Dickens Ave., Chicago, Ill.
- Colt, J. B. Co. (Acetylene gas generators), 42nd St. Bldg., New York, N. Y.
- Colton, Arthur Co. (Filing machines), 2600 Jefferson Ave. E., Detroit, Mich.
- Columbia Caliper Co. (Calipers), Marietta, Pa.
- Columbia Fire Extinguisher Co. (Fire extinguishers), 174 Centre St., New York, N. Y.
- Columbia Machine Tool Co. (Shapers), Hamilton, Ohio.
- Columbia Metal Box Co. (Electrical specialties), 220-228 E. 144th St., New York, N. Y.
- Columbia Metal Hose Works (Metal hose), 540-50 West 58th St., New York.
- Columbia Novelty Mfg. Co. (Belt hooks), 1431 N. 8th St., St. Louis, Mo.; 527 E. 49th St., Los Angeles, Cal.
- Columbia Nut & Bolt Co., Inc. (Locknuts), Bridgeport, Conn.; 4322 Keystone Ave., Chicago.
- Columbia Smelting & Refining Works (Metals), 365-367 West St., New York, N. Y.
- Columbia Steel & Shafting Co. (Shafting and tool steel), Pittsburgh, Pa.; Chicago, New York, Boston, Cleveland, Philadelphia, Washington, Detroit.
- Columbia Wax Works (Candles and tapers), 749-751 E. 137th St., New York, N. Y.; 9-10 Fulton Pl., Boston, Mass.
- ✦ Columbian Hardware Division of The Consolidated Iron & Steel Mfg. Co. (Vises, anvils, sash pulleys and registers, etc.), 1291 E. 53d St., Cleveland, O.; Washington, D. C.; Chicago, Ill.; San Francisco, Cal.; New York City; Boston, Mass.; St. Louis, Mo.; New Orleans; Richmond, Va.
- Columbian Iron Works (Hydrants, valves, mach'y), Chattanooga, Tenn.; New York; New Orleans; San Francisco; Portland.
- Columbian Rope Co. (Manila rope), Auburn, N. Y.; 370 River St., Chicago; 31-35 Burling Slip, New York; 131 Beverly St., Boston.
- Columbian Steel Tank Co. (Steel tanks, etc.), 1601-1621 W. 12th St., Kansas City, Mo.
- Columbiana Boiler Co., The (Boilers, tanks, cars, etc.), Columbiana, O.
- Columbiana Pump Co. (Deep well pumps), Columbiana, O.
- Columbus Anvil & Forging Co., The (Anvils), 123-127 W. Frankfort St., Columbus, O.
- Columbus Belting & Supply Co. (Leather belting), 195 E. Long St., Columbus, O.
- Columbus Bolt Works Co. (Bolts, nuts, etc.), Columbus.
- Columbus Brass Co., The (Plumbers' supplies), 540 Dublin Ave., Columbus, O.
- Columbus McKinnon Chain Co. (Chains), Columbus, O.
- Columbus Forge & Iron Co. (Anvils and vises), Foot of W. 1st St., Columbus, O.
- Columbus Handle & Tool Co., The (Handles and tools), Columbus, Ind.
- Columbus Lift Truck Co. (Elevating transfer trucks), 136 E. Gay St., Columbus, O.
- Columbus Machine Works (Pipe threading machines), Columbus, Ind.
- Columbus McKinnon Chain Co., Inc. (Chains), Tonawanda, N. Y.
- Columbus Pump & Supply Co., The (Water supply systems), 35 Vine St., Columbus, O.
- Columbus Steam Boiler & Heater Co. (Boilers, stacks and tanks), opp. T. & O. C. Ry. freight office, Columbus, O.
- Columbus Steam Pump Works Co., The (Steam pumps), 83 W. Broad St., Columbus, O.
- Columbus Washed & Sterilized Wiper Co. (Machine wipers), 622 Parsons Ave., Columbus, O.
- Columbus Wire & Iron Works (Iron fabrications), 540-542 Poplar Ave., Columbus, O.
- ✦ Combination Rubber Mfg. Co., The (Mechanical rubber goods), Bloomfield, N. J.; 30 Church St., New York; 803 Wainwright Bldg., St. Louis.
- Combo Engineering Co., Inc. (Water columns), Union Springs, N. Y.
- Combustion Engineering Corp. (Stokers), 11 Broadway, New York; Philadelphia; Pittsburgh; 343 S. Dearborn St., Chicago; Salt Lake City; Boston; Minneapolis; Birmingham.
- Comet Electric Co. (Electric lighting plants), 1237 St. Paul St., Indianapolis, Ind.
- Commercial Acetylene Supply Co., The (Acetylene equipment), 80 Broadway, New York, N. Y.
- Commercial Chemical Co. (Belt dressing), 683 Atlantic Ave., Boston, Mass.
- Commercial Engine Co. (Engines, hoists, drillers), 2416-2438 Porter St., Los Angeles, Cal.; 1228 H St., Fresno, Cal.
- Commonwealth Brass Corp., 5781 Commonwealth Ave., Detroit, Mich.; Mr. E. W. Sanborn, R. 642, 332 S. Michigan Ave., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Commonwealth Motors Co. (Marine motors), 326 W. Madison St., Chicago, Ill.
- Community Machine & Tool Works, Inc. (Thread grinders), 154 Grand St., New York, N. Y.
- Composition Wood Products Co. (Pulleys), 10 S. La Salle St., Chicago.  
(See index to advertisement, pages 7, 8 and 9.)
- Compound Injector & Specialty Co. (Plumbers' specialties), 419-421 N. Laramie Ave., Chicago, Ill.
- Compressed Steel Shafting Co. (Shafting), Readville, Boston, Mass.
- Compton, W. H., Shear Co., The (Shears and cutlery), 314-320 Camden St., Newark, N. J.
- Conant Bros. Co. (Bathroom fixtures), Somerville, Mass.
- Conant & Donelson Co. (Taps, dies, etc.), Conway, Mass.
- Concord Foundry & Machine Co. (Iron plumbing goods), Concord, N. H.
- Concord Mfg. Co., The (Soil pipe plugs), Dayton, O.
- Concord Woodworking Co. (W. C. seats and tanks), Concord, N. H.



- Cone Automatic Machine Co., Inc. (Lathes), Windsor, Vt.
- Conkey, H. D., & Co. (Cranes), Mendota, Ill.
- Conley, F. Co., The (Test indicators), 502 Book Bldg., Detroit, Mich.
- Conneaut Can Co., The (Metal shipping cans), Conneaut, O.
- Conneaut Shovel Co., The (Shovels and scoops), Conneaut, O.
- Connecticut Blower Co., Inc., The (Fans and blowers), 133-35 Sheldon St., Hartford, Conn.; 149 Broadway, New York; Boston.
- Connecticut Brass Corp. (Brass sheets and bars), West Cheshire, Conn.
- Connecticut Brass & Mfg. Co. (Brass sheets), Waterbury, Conn.
- Connecticut Turbine Mfg. Co. (Steam turbines), New London, Conn.
- Connecticut Valley Mfg. Co., The (Expansion bits), Centerbrook, Conn.
- Connellsville Mfg. & Mine Sup. Co. (Pumps, hoists, fans, etc.), Connellsville, Pa.
- Connellsville Machine & Car Co. (Mine pumps and mach'y), Connellsville, Pa.
- Connelly, D., Boiler Co., The (Tanks and boilers), Ivanhoe Rd. and N. Y. C. & St. L. R.R., Cleveland, O.; 15 E. Van Buren St., Chicago; 256 Broadway, New York; 711 Empire Bldg., Pittsburgh; 423 Fifth St. So., Minneapolis; 504 City Bank Bldg., Syracuse; 950 Nicholas Bldg., Toledo.
- Connersville Blower Co. (Forge blowers), Connersville, Ind.; 53 W. Jackson Blvd., Chicago; 114 Liberty St., New York.
- Conner & Co., Inc. (Tanks and stacks), 2d and Luzerne Sts., Philadelphia, Pa.
- Connor, M. A. (Plumbers' specialties), Lockport, N. Y.
- Connors, Wm., Paint Mfg. Co. (Paints, cements, etc.), Troy, N. Y.
- Conover-Overkamp Machine & Tool Co., The (Lathes), 840 Germantown St., Dayton, O.
- Conrad, John F. (Plumbing specialties), 861 Elizabeth Ave., Elizabeth, N. J.
- Conradson Machine Tool Co. (Lathes), Green Bay, Wis.
- Conran Anti Freezing Closet Co. (Water closets), 305 Pearl St., New York, N. Y.
- Consolidated Belting Co. (Leather belting), Germantown and Sedgley Aves., Philadelphia; 50 Church St., New York, N. Y.
- Consolidated Car Heating Co. (Car heating equipment), 413-423 N. Pearl St., Albany, N. Y.; Singer Bldg., New York; Fisher Bldg., Chicago.
- Consolidated Engine Stop Co. (Engine stops), 120 Liberty St., New York, N. Y.
- Consolidated Expanded Metal Co. (Expanded metal), 562 W. Monroe St., Chicago.
- Consolidated Iron Works (Engines and wheelbarrows), Hoboken, N. J.
- Consolidated Mfg. Co. (Brass and copper goods), Dayton, Ohio.
- Consolidated Packing & Supply Co., The (Packings), 21 Barclay St., New York, N. Y.
- Consolidated Pump Co., The (Wooden pumps), Toledo, Ohio.
- Consolidated Rubber Co. (Mechanical rubber goods), Trenton, N. J.
- Consolidated Safety Valve Co., The (Valves), 119 W. 40th St., New York, N. Y.; 27 N. Jefferson St., Chicago.
- Consolidated Utilities Corp. (Electric lighting plants), 730 S. Michigan Ave., Chicago, Ill.
- Constant, B. S., Mfg. Co., The (Agricultural and transmission mach'y), Euclid Ave., Bloomington, Ill.
- Construction Machinery Co. (Concrete mixers), Waterloo, Ia.; 453 E. 3rd St., Los Angeles, Calif.
- Continental Car Co. of America (Industrial cars), Highland Park, Louisville, Ky.
- Continental File Corp. (Files), Anderson, Ind.
- Continental Fibre Co., The (Fibre goods), Newark, Del.; 233 Broadway, New York; 525 Market St., San Francisco, Cal.; 301 Fifth Ave., Pittsburgh; 332 S. Michigan Ave., Chicago; 411 S. Main St., Los Angeles; Toronto.
- Continental Gin Co. (Mach'y and engines), Birmingham, Ala.; Dallas; Atlanta; Memphis; Charlotte.
- Continental Grinder Co., Minneapolis, Minn.
- Continental Metal Co. (Bearing metals), 26 Court St., Brooklyn, N. Y.
- Continental Motors Corp. (Gas engines), Detroit, Mich.
- Continental Rubber Works (Mechanical rubber goods), Erie, Pa.; 33 Broad St., Boston; 35 Murray St., New York; 1561 Columbus Rd., N.W., Cleveland; 180 N. Market St., Chicago; 1012 Farnum St., Omaha; 717 Delaware St., Kansas City; 5 Wood St., Pittsburgh.
- Continental Wood Screw Co. (Screws), New Bedford, Mass.
- Contractors Machinery Co. (Concrete mixers), Keokuk, Iowa.
- Converse, F. S., Co., Inc. (Coal dealers' equipment), Johnson City, N. Y.
- Conveying Weigher Co., The (Belt idlers), 90 West St., New York, N. Y.
- Conway Clutch Co. (Friction clutches), 1952 W. 6th St., Cincinnati, O.
- Cook, A. D., Inc. (Well supplies), Lawrenceburg, Ind.
- Cook, Asa S., Co. (Screw mach'y), Hartford, Conn.
- Cook, C. Lee, Mfg. Co. (Packings), 8th St., Louisville, Ky.; 13 Astor Pl., New York; 80 Marion St., Seattle, Wash.
- Cook, H. N., Belting Co. (Leather belting), 401 Howard St., San Francisco, Cal.
- Cook Spring Co. (Steel springs), 420 E. 106th St., New York, N. Y.
- Cook & Chick Co. (Firing tools), 18-20 E. Kinzie St., Chicago, Ill.
- Cook's Sons, Adam, 708 Washington St., New York.
- Cooley Mfg. Co., Inc. (Engineers' specialties), 366 W. Broadway, New York, N. Y.; 1830 Pioneer Ave., Pittsburgh.
- Cooper, C. & G., Co., The (Steam and gas engines), Mt. Vernon, O.; 11 Broadway, New York; 201 Devonshire St., Boston; 1323 Oliver Bldg., Pittsburgh; 164 N. Los Angeles St., Los Angeles.
- Cooper Flexible Transmission Co., Inc. (Universal joints), 1723 Eighth Ave., Brooklyn, N. Y.
- Cooper Foundry Co., The (Backwater traps), Atchison, Kans.
- Cooper Heater Co. (Heating boilers), Carlisle, Pa.
- Cooper Hose Mender Co. (Hose menders), Providence, R. I.
- Cooper Sanitary Mfg. Co. (Cleaning specialties), 34th and Chestnut Sts., Philadelphia; Cleveland, Detroit, Portsmouth, Ohio.
- Coosa Pipe & Foundry Co. (Soil pipe), Gadsden, Ala.
- Coppus Engineering & Equipment Co. (Blowers, ventilators, turbines), 344 Park Ave., Worcester, Mass.; New York; Philadelphia; Pittsburgh; Chicago; Cleveland.
- Corcoran, A. J., Inc. (Well supplies), 761 Jersey Ave., Jersey City, N. J.
- Cordesman, Reichtin Co. (Woodworking mach'y), 215 Butler St., Cincinnati, O.
- Cordley & Hayes (Water coolers, etc.), 7 Leonard St., New York, N. Y.; 180 N. Dearborn St., Chicago; Denver; Boston; San Francisco; Tacoma.
- Corinth Machinery Co. (Engines, boilers, mach'y), Corinth, Miss.
- Cork Insert Co. (Pulleys, etc.), 164 Federal St., Boston, Mass.
- Corley-De Wolfe Co. (Pipe unions), Elizabeth, N. J.
- Corliss Supply & Mfg. Co. (Boiler compounds, etc.), 1906 Olive St., St. Louis, Mo.
- Cornell, W. G., Co. (Irrigating sprinklers), Everett Bldg., Union Sq., New York; 80 E. Jackson Blvd., Chicago; Cleveland, Washington, Kansas City, Baltimore, Newark, Boston, Philadelphia.
- Cornell & Underhill (Pipe and bends), Spring and Greenwich Sts., New York, N. Y.
- Corning Oil Co., Inc. (Oils and greases), 206 Water St., New York, N. Y.
- Corn conveyor Belt Co. (Conveyor belting), 53 W. Jackson Blvd., Chicago, Ill.
- Corr, Patrick & Sons, Inc. (Waste), Trenton Ave., Oakdale and Tucker Sts., Philadelphia, Pa.
- ◆ Cortland Grinding Wheel Corp. (Grinding wheels), Cortland, N. Y.
- Cortland Specialty Co. (Welding compound, etc.), Cortland, N. Y.
- Cortland Welding Compound Co. (Welding compound), Cortland, N. Y.
- Cosgrove & Cosgrove Co. (Closet floor flanges), 18 Old Slip, New York.
- Cote Bros. Mfg. Co. (Renewable fuses), 7 S. Dearborn St., Chicago, Ill.
- Cotton States Belting & Sup. Co. (Belting), 257 Decatur St., Atlanta, Ga.
- Coulter-Curtis Screw Co., Inc. (Screws), 17 Gull St., Buffalo, N. Y.
- Coulter & McKenzie Machine Co., The (Power presses), Water & Golden Hill Sts., Bridgeport, Conn.
- Coupe, Wm., Corp. (Leather belting), South Attleboro, Mass.
- Couse & Bolten, Inc. (Leather belting), 42-44-46 Lafayette St., Newark, N. J.; 329 Lafayette St., New York; 300 Colt Bldg., Paterson, N. J.; 49 N. 6th St., Philadelphia.
- Covel Mfg. Co. (Woodwork mach'y), Big Rapids, Mich.
- Covington Machine Co. (Punches, shears, engines), Covington, Va.; Uniontown, Pa.
- Cowan, Andrew, & Co., Inc. (Leather belting), 421-423 W. Main St., Louisville, Ky.
- Cowan Mfg. Co., The (Water closet seats), 116-118 Mendota, Pittsburgh, Pa.
- Cowan Truck Co., Industrial Truck Co., Div. (Factory trucks), Holyoke, Mass.; New York, Chicago, Denver, San Francisco, Philadelphia, Washington, Cincinnati, Detroit, Cleveland, Indianapolis, Ft. Worth, Atlanta.
- Cowanesque Valley Iron Works (Pulleys), Cowanesque, Pa.
- Cowles Tool Co. (Milling cutters), 2086 W. 110th St., Cleveland, O.
- Cox, Abram, Stove Co. (Heating boilers), American and Dauphin Sts., Philadelphia, Pa.; 101 Park Ave., New York; 736 W. Monroe St., Chicago.



- Cox Brass Mfg. Co., Ltd.** (Welding and cutting equipment), Van Woert & No. Pearl Sts., Albany, N. Y.; 161 W. 64th St., New York; 5601 Carnegie Ave., Cleveland; 2551 Indiana Ave., Chicago.
- Cox, J.** Fillmore (Pipe bending machines, etc.), Bayonne, N. J.
- Cox & Sons Co., The** (Pipe threading mach'y), Bridge-ton, N. J.; Lafayette Bldg., Philadelphia.
- Coxsackie Wheel & Mfg. Co.** (Polishing wheels), Cocksackie, N. Y.
- Coyne & Delany Co.** (Plumbers' supplies), 323-24 Kent Ave., Brooklyn, N. Y.
- Crabill Hose Clamp Co.** (Hose clamps), 310 Hamlin Ave., Battle Creek, Mich.
- Crafts, Arthur A., & Co.** (Diamond pointed tools), 125 Summer St., Boston, Mass.
- Craftsman Tool Co., The** (Machines), Conneaut, Ohio.
- Cragin, M. J.** (Garbage burners), 746 E. 43d St., Chicago, Ill.
- Craig, David** (Plumbers' supplies), 70 Broad St., Boston, Mass.
- Craig, James** (Gas engines), Jersey City, N. J.
- Craig-Reynolds Foundry Co.** (Furnaces and boilers), Dayton, O.
- Craftsman Tool Co., The** (Pipe wrenches), Conneaut, O.
- Crampton-Farley Brass Co.** (Plumbing brass goods), 231 Main St., Kansas City, Mo.
- Crandall Packing Co.** (Packings), Palmyra, N. Y.; 6 Church St., New York; 26 N. Franklin St., Chicago; Cleveland, Boston, Pittsburgh, Birmingham, New Orleans, Dallas, Kansas City, Worcester, Mass.
- Crane Co.** (Plumbers' and steamfitters' supplies), 336 S. Michigan Ave., Chicago, Ill. Branches in principal cities.  
(See index to advertisement, pages 7, 8 and 9.)
- Crane Engineering Co., The** (Cranes), Columbus, O.
- Crane, James W., Co., Inc.** (Oils, greases, etc.), 23-27 N. Pier St. (Hamilton Ferry), Brooklyn, N. Y.
- Crane Oil Burner Co.** (Oil burners), 174 N. Mich. Ave., Chicago.
- Crane Packing Co., The** (Piston packing), 1811 Cuyler Ave., Chicago, Ill.; 1945 Park Row Bldg., New York; 414 Scanlan Bldg., Houston, Tex.
- Crane Puller Co.** (Wheel puller), 54 Lake St., Arlington, Mass.
- Crane, Wm. M., Co.** (Gas appliances), 16-20 W. 33d St., New York, N. Y.
- Cranford Ollstone Works** (Oil stones), Cranford, N. J.
- Crawford Company** (Pipe fittings), 346 S. Canal St., Chicago, Ill.; 44 N. 4th St., Philadelphia.
- Crawford, L. M., Asbestos Co.** (Pipe covering), 1901 Clay St., Denver, Colo.
- Crawford Machine Tool Co., Inc.** (Lathes), 21 Park Row, New York, N. Y.
- Crawford & McCrimmon Co.** (Acid pumps), Brazil, Ind.
- Creasy Rotary Filer Co., The** (Gin saw filers), Bal-linger, Tex.
- Crefeld Waste & Bating Co.** (Waste), Saylesville, R. I.
- Crescent Belt Fastener Co., Inc.** (Belt fasteners), 381-385 Fourth Ave., New York, N. Y.; 32 Front St. W., Toronto. (See index to advertisements, pages 7, 8 and 9.)
- Crescent Co., Inc., The** (Saws, screwdrivers, etc.), Mer-iden, Conn.
- Crescent Forgings Co.** (Pipe wrenches), Oakmont, Pa.
- Crescent Machine Co., The** (Woodworking mach'y), 96 Columbia St., Leetonia, O.
- Crescent Oil Co.** (Cutting lubricants), 48 Church St., New York, N. Y.
- Crescent Phosphorized Metal Co., The** (Metals), 2314 Wood St., Philadelphia, Pa.
- Crescent Tool Co.** (Pliers, wrenches, etc.), James-town, N. Y.
- Crescent Truck Co.** (Factory trucks), 347-349 First Ave., Elizabeth, N. J.
- Crescent Washing Machine Co.** (Metal washing machines), New Rochelle, N. Y.; 800 N. Clark St., Chicago, Ill.
- Cressman, H. C., Company** (Pipe fittings), Drexel Bldg., Philadelphia, Pa.  
(See index to advertisement, pages 7, 8 and 9.)
- Cresson-Morris Co.** (Power transmission mach'y), Allegheny and W. 17th Sts., Philadelphia, Pa.
- Crestline Mfg. Co.** (Pumps, etc.), Crestline, O.
- Crocker-Wheeler Co.** (Motors and dynamos), Am- pere, N. J.; Birmingham, Baltimore, Boston, 37 W. Van Buren St., Chicago; Cincinnati, Cleve-land, New York, Pittsburgh, Philadelphia, Newark, San Francisco, Syracuse.
- Crockett, Wm. P., Co.** (Pipe cutters), 311 S. Jefferson St., Chicago, Ill.
- Crocker National Fire Prevention Engineering Co.** (Fire protection supplies), 22 W. 30th St., New York, N. Y.
- Cronau, Otto H.** (Tool holders), 330 East 87th St., New York.
- Cronk & Carrier Mfg. Co., The** (Pliers, wrenches, etc.), Elmira, N. Y.
- Crook, H. E., Co., Inc.** (Power plant equipment), 23 Light St., Baltimore, Md.
- Crosby Co., The** (Rubber buckets), Cuba, N. Y.
- ◆ **Crosby Steam Gauge & Valve Co.** (Power plant supplies), 40 Central St., Boston, Mass.; 44 Dey St., New York; 180 N. Market St., Chicago.
- Cross Bros. Co., Inc.** (Leather belting), 112-114 Mill St., Rochester, N. Y.
- Cross Engineering Co.** (Perforated metals, etc.), Car-bondale, Pa.
- Crowder Bros.** (Fire sprinklers), Laclede Bldg., St. Louis, Mo.
- Crowell, D. J.** (Swages and shapers), 61 The Terrace, Buffalo, N. Y.
- Crowell Mfg. Co.** (Blowers and pumps), 296-298 Taaffe Pl., Brooklyn, N. Y.
- Crowley, John A., Co.** (Electric furnaces), 120 Lib-erty St., New York.
- Crown Belt Food Co.** (Belt dressing), 16908 Waterloo Rd., Cleveland, O.
- Crown Die & Tool Co.** (Stocks, dies, etc.), 555 W. Monroe St., Chicago, Ill.
- Crown Mfg. Co.** (Boiler compound), 5716 Euclid Ave., Cleveland, O.
- Crown Pipe & Foundry Co., The** (Soil pipe), Jackson, O.
- Crown Slate Co.** (Structural slate), Pen Argyl, Pa.
- Crown Ventilator Co.** (Ventilators), Wells Bldg., Milwaukee, Wis.
- Crozier, Wm., & Co.** (Pipe dampers), 30 W. Canton St., Boston, Mass.
- Crucible Steel Forge Co., The** (Forgings), 6600 Grant Ave., Cleveland, O.
- Cruckshank Engine Co.** (Engines and mach'y), 281 Dyer St., Providence, R. I.
- Cruise & Company** (Boiler tube protectors), 144 Broad-way, Elizabeth, N. J.
- Cruse-Kemper Co.** (Gas plant equipment), Ambler, Pa.
- Crush, F. A., & Co.** (Sheet packing holders), 1036 Everett Ave., Louisville, Ky.
- Cruver Mfg. Co.** (Workmen's badges), 2456 W. Jack-son Blvd., Chicago, Ill.
- Cryer, T. B., Co.** (Floor plates, etc.), 247-249 High St., Newark, N. J.
- Cudell, F. E.** (Plumbing traps), 10013 Detroit Ave., Cleveland, O.
- Cullen-Atkinson Co., Inc., The** (Enameling ovens), Hartford, Conn.
- Cummings Filter Co., The** (Water filters), 27th and Liberty Sts., Pittsburgh, Pa.; 305 Bond Bldg., Washington, D. C.; 817 So. 2d St., Springfield, Ill.
- Cunco-Hennebery Service Co.** (Supply house cata-logs), 455 W. 22d St., Chicago, Ill. (See index to advertisements, pages 7, 8 and 9.)
- Curry Bros. Oil Co.** (Boiler compounds), 253-255 Franklin St., Boston, Mass.
- Curry, J. W., Co.** (Cotton belting), 2615 Cummins St., Cincinnati, O.
- Curtainless Shower Co.** (Shower baths), 507 5th Ave., cor. 42d St., New York, N. Y.; 5 S. Wabash Ave., Chicago, Ill.; 18 S. 7th St., Philadelphia; 1404 Arrott Bldg., Pittsburgh, Pa.
- Curtin-Hebert Co., Inc.** (Emery wheel dressers), Gloversville, N. Y.
- Curtis, Albert B.** (Centrifugal separators), P. O. Box 44, Worcester, Mass.
- Curtis, J. H., Co., The** (Marine closets), 2 South St., New York.
- Curtis Machine Corp.** (Machinery), Jamestown, N. Y.
- Curtis & Co. Mfg. Co.**, 1504 Kienlen Ave., St. Louis, Mo.; 30 Church St., New York.
- Curtis & Curtis Co., The** (Pipe tools and mach'y), 120 Garden St., Bridgeport, Conn.
- Curtis Pneumatic Machinery Co.** (Compressors, hoists, etc.), 1597 Kienlen St., St. Louis; 30 Church St., New York.
- Curtis Saw Co.** (Circular saws), 1504 Kienlen Ave., St. Louis, Mo.
- ◆ **Cushman Chuck Co.** (Chucks), 189 Allyn St., Hart-ford, Conn.; 38 Vesey St., New York; Monadnock Bldg., San Francisco.
- Cushman Motor Co.** (Gas engines), Lincoln, Nebr.
- Custer Coupling Co.** (Pipe line fittings), Bradford, Pa.
- Cutler-Hammer Mfg. Co.** (Electric specialties), Mil-waukee, Wis.; New York, Chicago, Pittsburgh, Philadelphia, Cleveland, Boston, Cincinnati, De-troit, St. Louis.
- Cutter & Wood Supply Co.** (Grinders), 274 Friend St., Boston, Mass.; Providence, R. I.
- Cuyler & Mohler** (Pipe fittings), 611-613 William St., Baltimore, Md.
- Cyclone Blow Pipe Co.** (Dust collectors, etc.), 2553 W. 21st St., Chicago, Ill.
- Cyclone Fence Co.** (Steel fencing), Waukegan, Ill.
- Cyclone Grate Bar Co.** (Boiler grates), 9 Grimes St., Buffalo, N. Y.

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- D. G. C. Trap & Valve Co.** (Steam heating specialties), 18 E. 41st St., New York, N. Y.
- D. C. Mfg. Co., The** (Plumbing brass goods), Can-ton, O.
- D. & T. Mfg. Co., The** (Heating specialties), 1911-13 Pine St., St. Louis, Mo.
- D & W Fuse Works of General Electric Co.** (Mag-netic chucks, fuses, etc.), Providence, R. I.
- Dafoe-Eustice Co.** (Canvas goods), 1164 W. Jefferson Ave., Detroit, Mich.; 35 South Dearborn St., Chi-cago, Ill.; 253 Broadway, New York.

- Dahlquist Mfg. Co. (Copper tanks and boilers), 50 W. 3d St., South Boston, Mass.
- Dall Steel Products Co. (Chemical closets), 835 E Main St., Lansing, Mich.
- Dake Engine Co. (Engines, hoists, etc.), Grand Haven, Mich.
- Dallas Brass & Copper Co. (Tubing), 820 Orleans St., Chicago, Ill.
- Dallett, Thos. H., Co. (Pneumatic tools), Broad and Federal Sts., Philadelphia, Pa.
- Daly Plumbing Supply Co. (Plug traps), 93 Cummings St., Boston, Mass.
- Dalton Manufacturing Corp. (Engine lathes), Sound Beach, Conn.
- Dalton Manufacturing Corp. (Engine lathes), 1911 Park Ave., New York.
- Damascus Bronze Co. (Bearings), South Ave. and Sturgeon St., Pittsburgh, Pa.
- Damascus Mfg. Co. (Cutting oils), Cleveland, O.; Chicago, Ill.
- D'Amour Machine Co. (Bench drills), 78-80 Cortlandt St., New York City.
- Dampney Company of America (Boiler coatings), 50 Business St., Boston, 36 Mass.
- Dane Mfg. Co. (Stock tank heaters), Dane, Wis.
- Dangler Stove Co., Div. American Stove Co. (Gas appliances), Perkins Ave., Cleveland, O.; 61 N. 2d St., Philadelphia; 9 Union St., Boston; 218 Mission St., San Francisco.
- Danielson, J. P. & Co., Inc. (Wrenches and pliers), Jamestown, N. Y.
- Danubil Company, Inc. (The Packings), 253 Broadway, New York, N. Y.; Boston; Pittsburgh; Philadelphia; Reading, Pa.; Denver, Colo.; Syracuse, N. Y.; Watertown, N. Y.
- Danville Iron & Steel Co. (Power shears), Danville, Pa.
- Danzer Metal Works, (Sheet metal goods), Hagerstown, Md.
- Dargent, Chas. (Glass floats), 360 Crescent St., Brooklyn, N. Y.
- Darling Valve & Mfg. Co., Ltd. (Well supplies), Williamsport, Pa.; 705 Singer Bldg., New York; 815 Arcade Bldg., Philadelphia; 537 Rookery Bldg., Chicago.
- Dart, E. M., Mfg. Co. (Pipe fittings), 134 Thurbers Ave., Providence, R. I.; Toronto, Canada. (See index to advertisements, pages 7, 8 and 9.)
- Darwin & Milner, Inc. (Tool steel), 403 Long Ave., Cleveland, O.; 9 S. Clinton St., Chicago.
- Dauber-Bell Machine Co. (Glue room mach'y), Oshkosh, Wis.
- Dauber-Kratsch Co. (Grinding machines), Oshkosh, Wis.
- Daugherty Mfg. Co., Inc., The (Barrel jacks), Kittanning, Pa.
- Daugherty-Smith-Phillips Co. (Stone drills), 1537 Cortland St., Chicago, Ill.
- Daugherty, W. E. (Gas machines, etc.), Princeton, Ind.
- Daum, A. F. (Fuses), 1159 Hodgkiss St., Pittsburgh, Pa.
- Davenport Locomotive Works (Lathes), Davenport, Iowa.
- Davenport Machine & Foundry Co. (Machinery), 1628-32 W. 4th St., Davenport, Ia.
- Davenport Machine Tool Co., Inc. (Screw machines), Rochester, N. Y.
- Davenport Mfg. Co., Meadville, Pa.
- Davenport Mfg. Co., Inc. (Baling presses), Davenport, Ia.
- ♦ Davey, E. H., Co. (Friction boards), Davey's Lane, Bloomfield, N. J.
- Davey, W. O. & Sons (Friction board and oakum), 164 Laidlaw Ave., Jersey City, N. J.
- Davidson Fan Co. (Ventilating fans), Newton, Mass.
- Davidson Heating & Construction Co. (Heating appliances), 8 York St., Hanover, Pa.
- Davidson, M. T., Co. (Steam pumps), 154 Nassau St., New York, N. Y.; 135 Oliver St., Boston; 147 N. 7th St., Philadelphia; Granite Bldg., Rochester, N. Y.; 817 Albee Bldg., Washington; 1518 Farmers Bank Bldg., Pittsburgh; 609 Wade Bldg., Cleveland; 5148 W. Lake St., Chicago.
- Davis Acetylene Co. (Acetylene apparatus), 901 Prospect St., Elkhart, Ind.
- Davie Tool Co., The (Graduating machines), E. 118th St. and Euclid Ave., Cleveland.
- Davis Boring Tool Co. (Boring tools), 3718-24 Forest Park Blvd., St. Louis, Mo.
- Davis Barron U. (Warm air furnaces), Cross St. and Erie R. R., Niagara Falls, N. Y.
- Davis Instrument Mfg. Co. (Anemometers), 110 W. Fayette St., Baltimore, Md.
- Davis & Farnum Mfg. Co. (Pipe and fittings), Waltham, Mass.; 8 Oliver St., Boston.
- Davis Foundry & Machine Works (Water turbines), Rome, Ga.
- Davis, John C. (Leather washers, etc.), 77 South Ave., Rochester, N. Y.
- ♦ Davis, G. M., Regulator Co. (Heating and power specialties), 422 Milwaukee Ave., Chicago, Ill.; New York; Boston; Philadelphia; St. Louis; San Francisco; Pittsburgh; Baltimore; Minneapolis.
- Davis-Hansen Pump Co. (Pumps), Oshkosh, Wis.
- Davis, I. B., & Son, successors Pratt & Cady Co., Inc. (Pumps and heaters), Hartford, Conn.
- Davis, S. W., Oil Co. (Dressing, oil & greases), Dorrance St. Wharf, Providence, R. I.
- Davis Machine Tool Co., Inc. (Metal working mach'y), 305 St. Paul St., Rochester, N. Y.
- Davis-Scott Belting Co. (Leather belting), 108-10-12 Union Ave., Portland, Ore.
- Davis & Thompson Co. (Cylinder boring machine), 251 Read St., Milwaukee, Wis.
- Davis-Watson Mfg. Co. (Roof flanges), Nashua, N. H.
- Davis & Hemphill (Screw machine products), Elkridge, Md.
- Davison, N. C., Gas Burner & Welding Co. (Gas burners), 3147 Penn Ave., Pittsburgh, Pa.
- Dawson Belting Co. (Balata belting), 96 Warren St., New York.
- Dawson Mfg. Co. (Grease Cups), 2012-28 Larabee St., Chicago, Ill.
- Day & Night Solar Heater Co. (Solar heaters), Monrovia, Cal.
- Dayton Car Wrench Co. (Car wrenches), Dayton, Ohio.
- Dayton-Dowd Co. (Pumps), Quincy, Ill.
- Dayton Engine Works (Engines and pumps), Dayton, Ohio.
- Dayton-Globe Iron Works Co., The (Engines and mach'y), Dayton, O.
- Dayton Grinding Wheel Co., The (Grinding wheels), Dayton, O.; 441 S. Dearborn St., Chicago; 60 Peet Ave., Newark; 517 Carondelet St., New Orleans.
- Dayton Malleable Iron Co., The (Malleable specialties), Dayton, O.
- Dayton Mfg. Co., The (Railway equipment), Dayton, Ohio.
- Dayton Molding Machine Co. (Molding machines), Dayton, O.
- Dayton Pipe Coupling Co. (Pipe fittings), 125-129 Mill St., Dayton, O.
- Dayton Pneumatic Tool Co. (Pneumatic hammers), Dayton, O.; 1019 Marquette Bldg., Chicago; 133 Greenwich St., New York; 803 Schmidt Bldg., Pittsburgh.
- Dayton Pump & Mfg. Co., The (Pumps), 500 Webster, Dayton, O.; Atlanta; Buffalo; Chicago; Cleveland; Des Moines; Detroit; Kenersville, N. C.; Minneapolis; Natchez, Miss.; New York; Pittsburgh; San Francisco; St. Louis.
- Dayton Rubber Mfg. Co., The (Tires), Dayton, Ohio.
- Dayton Steel Foundry Co., The (Steel castings), Dayton, O.; Chicago, Cincinnati, Detroit.
- Dealers Steam Packing Co., The (Packings), Palmyra, N. Y.
- Dean Bros., Steam Pump Works (Pumps), 323 West Tenth St., Indianapolis, Ind.; 141 Broadway, New York.
- Dean & Robinson (Screwdrivers), 11 Warren St., New York, N. Y.
- Dearborn Brass Co. (Plumbing brass goods), 805 B Ave. West, Cedar Rapids, Ia.
- Dearborn Chemical Company (Lubricants, etc.), 332 S. Michigan Ave., Chicago, Ill.; 299 Broadway, New York.
- Decatur Cornice & Roofing Co. (Sheet metal goods), 620 Main St., Decatur, Ill.
- Decatur Foundry Furnace & Machine Co. (Friction clutches), Decatur, Ind.
- Decatur Pump Company (House pumps), 634 E. Cerro Gordo St., Decatur, Ill.
- Decker Mfg. Co. (Blow torches), 251 Elm St., Newark, N. J.
- Deegan, E. J., Mfg. Co., The (Damper regulators), 756 Whitlock Ave., New York City.
- Defender Automatic Regulator Co. (Draft gages), 709 Pine St., St. Louis, Mo.
- Defiance Lantern & Stamping Co. (Lanterns), 33 Hebard St., Rochester, N. Y.
- Defiance Machine Works (Woodworking mach'y), Defiance, O.; 50 Church St., New York.
- Defiance Packless Valve & Mfg. Co. (Radiator valves), 431 S. Dearborn St., Chicago, Ill.
- De Forest Sheet & Tin Plate Co. (Plates), Niles, Ohio.
- Degen Belting Co., L. P. (Leather belting), San Francisco, Cal.
- De Haven Mfg. Co. (Box strapping), 50 Columbia Heights, Brooklyn, N. Y.
- Deily & Fowler Mfg. Co. (Gas plants), 39 Laurel St., Philadelphia, Pa.
- Delapierre, Arthur, Inc. (Tool handles), 19 Warren St., New York, N. Y.
- De Laval Steam Turbine Co. (Pumps and turbines), Trenton, N. J.
- De La Vergne Machine Co. (Gas engines and mach'y), Foot of East 138th St., New York, N. Y.; 176 Federal St., Boston; 380 Bourse Bldg., Philadelphia; 417 S. Dearborn, Chicago; Neave Bldg., Cincinnati; R. A. Long Bldg., Kansas City; Gas & Electric Bldg., Denver; 1501 Carter Bldg., Houston; 354 Pine St., San Francisco; 126 S. Los Angeles St., Los Angeles.
- Delaware Hard Fibre Co. (Fibre products), Wilmington, Del.; 560 W. Monroe St., Chicago; Detroit, Philadelphia, New York, St. Louis, Pittsburgh, Springfield, New Haven, Toledo.

- Delaware Metal Refinery (Metals), 18th St. and Washington Ave., Philadelphia, Pa.  
 Delaware Steel Co. (Seamless steel tubing), 33 West St., New York, N. Y.  
 Delco Light Co. (Pumps and motors), Dayton, O.  
 DeLoach Mill Mfg. Co. (Sawmill mach'y), Chattanooga, Tenn.  
 Delphos Mfg. Co. (Sheet metal goods), Delphos, O.  
 ♦ Delta File Works (Files), 4837 James St., Bridgeburg, P. O., Philadelphia, Pa.; 260 West St., New York; 62 E. Lake St., Chicago.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Demco Machine Tool Co. (Drilling machines), 706 Frankfort Ave., Cleveland, O.  
 ♦ Deming Co., The (Pumps), Salem, O.; Henion & Hubbell, 219 N. Jefferson St., Chicago; Harris Pump & Sup. Co., Pittsburgh; Ralph B. Carter Co., 152 Chambers St., New York; W. P. Dallett, Philadelphia; Root, Neal & Co., Buffalo; Chas. J. Jager Co., Boston; Sydnor Pump & Well Co., Richmond; Crane Co., in Portland; Seattle; Spokane; Los Angeles; San Francisco; St. Louis; Indianapolis; and other agencies in principal cities.  
 Dempster Mfg. & Supply Co. (Windmills, etc.), 802 S. W. Morgan St., Des Moines, Ia.; Sioux Falls, S. D.; Omaha; Kansas City; Oklahoma; Denver.  
 Dempster Mill Mfg. Co. (Pumping equipment), Beatrice, Neb.; Kansas City; Omaha; Sioux Falls, S. D.; Denver; Fargo, N. D.; Oklahoma City; Amarillo, Tex.  
 Denning Tractor Co. (Traction engines), Cedar Rapids, Iowa.  
 Denslow Heating Co. (Heating furnaces), Waverly, N. Y.  
 Denver Rock Drill Mfg. Co. (Drills), E. 39th Ave. and Williams St., Denver, Colo.; San Francisco; El Paso, Tex.; Seattle; Los Angeles; Salt Lake City; New York; Butte, Mont.; Houghton, Mich.; Joplin, Mo.; Birmingham, Ala.; Wallace, Idaho; Scranton, Pa.; Duluth; Cobalt, Canada; Toronto, Canada; Mexico City, Mexico.  
 Des Moines Bridge & Iron Co. (Stacks, towers, etc.), Des Moines, Ia.  
 Desmond-Stephen Mfg. Co. (Injectors, etc.), Urbana, O.; Hamilton, Ont., Canada.  
 Desper, H. A. (Plumbers' specialties), 16 Foster St., Worcester, Mass.  
 D'este Co., Julian (Power plant equipment, etc.), 26 Canal St., Boston, Mass.; Agencies: 180 Washington St., New York; 1233 Real Estate Trust Bldg., Philadelphia; 318 W. Washington St., Chicago, Ill.  
 Destructor Co., The (Garbage burners), 111 Broadway, New York, N. Y.  
 Dessau, D. (Diamond pointed tools), 180 Broadway, New York, N. Y.  
 Detmer Mfg. Co. (Acetylene generators), 2518 Archer Ave., Chicago.  
 Detrick, M. H. Co. (Boiler arches), 155 E. Superior St., Chicago, Ill.  
 Detroit Belt Lacer Co. (Belt lacers), 27 A St., Detroit, Mich.  
 Detroit Brass & Malleable Works (Pipe fittings and valves), 1177 Holden Ave., Detroit, Mich.; 66 Cliff St., New York.  
 Detroit Copper & Brass Rolling Mills (Copper and brass goods), Clark Ave., Detroit, Mich.; 111-13 N. Jefferson St., Chicago; 413-15 N. 3rd St., St. Louis, Mo.; 1001 Cincinnati Library Bldg., Cincinnati, O.  
 Detroit Edge Tool Works (Machine knives), Woodbridge and McDougall St., Detroit, Mich.  
 Detroit Gear & Machine Co. (Gears), 670 E. Woodbridge St., Detroit, Mich.  
 Detroit Graphite Co. (Paints), 518 Twelfth St., Detroit; New York; Boston; Philadelphia; Springfield, Mass.; Buffalo; Pittsburgh; Atlanta; Greenville, S. C.; Charlotte, N. C.; Chicago; St. Louis; Cincinnati; Cleveland; Columbus, O.; Kansas City, Mo.; Houston; El Paso; San Francisco.  
 Detroit Heater Corp. (Water heaters), 3959 Grand River Ave., Detroit, Mich.  
 Detroit Heating & Lighting Co. (Heating and lighting apparatus), Hart and Charlevoix, Detroit, Mich.  
 Detroit Hexagon Drill Co. (drills), 7641 Gratiot Ave., Detroit, Mich.  
 Detroit Hoist & Machine Co. (Hoists and cranes), 3201 Morrow St., Detroit, Mich.  
 Detroit Lead Pipe Works (Lead products), 517-2nd St., Detroit, Mich.  
 ♦ Detroit Lubricator Co. (Engine room supplies), 5938 Trumbull Ave., Detroit, Mich.; 1528 Tribune Bldg., Chicago.  
 Detroit Machine Tool Co. (Machine tools), 6545 St. Antoine St., Detroit, Mich.  
 Detroit Marvel Brass Mfg. Co. (Plumbing traps, etc.), 1742 Rivard St., Detroit, Mich.  
 Detroit Metal Refining Co. (Metals), 1002 Book Bldg., Detroit, Mich.  
 Detroit Metal Spinning Co. (Copper floats), 625 Monroe Ave., Detroit, Mich.  
 Detroit Nipple Mfg. & Pipe Cutting Co. (Pipe nipples), 526 Hendrie St., Detroit, Mich.  
 Detroit Nut Co. (Nuts), Hubbard Ave. and M. C. R. R., Detroit, Mich.  
 ♦ Detroit Oak Belting Co. (Belting), 3362 Wight St., Detroit, Mich.; Hurt Bldg., Atlanta, Ga.; 327 Second Ave., Pittsburgh.  
 Detroit Range Boiler & Steel Barrel Co. (Boilers and tanks), 2475 24th St., Detroit, Mich.; Chicago; San Francisco, St. Louis.  
 Detroit Sanitary Supply Co. (Plumbers' supplies), 5905 2nd St., Detroit, Mich.  
 Detroit Scoop Truck Co. (Scoops on wheels), 986 Osborne Pl., Detroit, Mich.  
 Detroit Screw Works (Screws, bolts, nuts, etc.), 1469 E. Atwater St., Detroit, Mich.  
 Detroit Seamless Steel Tubes Co. (Boiler flues), Detroit, Mich.; Endicott Bldg., St. Paul; 3d Nat'l Bank Bldg., St. Louis.  
 Detroit Stamping Co. (Milling spacers), 3445 W. Fort St., Detroit, Mich.  
 Detroit Star Grinding Wheel Co. (Grinding equipment), 111 Calvary Ave., Detroit, Mich.  
 Detroit Stoker Company (Stokers), Woodward and Horton Aves., Detroit, Mich.; New York, Pittsburgh, Cleveland, Cincinnati, Chicago, Philadelphia, Atlanta, Boston, Baltimore.  
 Detroit Torch & Mfg. Co. (Blow torches), 12057 Cardoni Ave., Detroit, Mich.  
 ♦ Detroit Twist Drill Co. (Drills, taps, reamers, etc.), 634-646 Fort St., W., Detroit, Mich.; Hunt Bldg., Atlanta, Ga.; 45 Warren St., New York.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Deverall Perfection Mfg. Co. (Oilers and lamps), Caton Ave. and E. 8th St., Brooklyn, N. Y.  
 DeVilbiss Mfg. Co., The (Painting machines), 3742 Detroit Ave., Toledo, O.  
 Devine Bros. Co. (Water motors), Utica, N. Y.  
 Devine, J. P., Co. (Drying apparatus), 1372 Clinton St., Buffalo, N. Y.  
 Devlin, Thos., Mfg. Co. (Radiators, pipe fittings, etc.), Lehigh, American and Third Sts., Philadelphia.  
 DeWaters Safety Latch Co. (Fire door latches), Far Rockaway, N. Y.  
 DeWeese, F. M., Co. (Lifting jacks), Chillicothe, O.  
 Dexter, I. H., Co., Inc. (Shaft couplings), Goshen, N. Y.  
 Dexter Metal Mfg. Co. (Lockers, shelving, etc.), Front and Arch Sts., Camden, N. J.; 30 Church St., New York, N. Y.  
 Diamond Chain & Mfg. Co. (Chains), Indianapolis, Ind.  
 Diamond Clamp & Flask Co. (Foundry supplies), Richmond, Ind.  
 Diamond Electric Water Heater Co. (Water heaters), Kohl Bldg., San Francisco, Cal.  
 Diamond Expansion Bolt Co. (Bolts, etc.), 90 West St., New York, N. Y.; 126 N. 10th St., Philadelphia, Pa.; 180 N. Market St., Chicago, Ill.; 1735 Boatman's Bank Bldg., St. Louis, Mo.; 156 Second St., San Francisco, Cal.; Montreal, Toronto, Winnipeg.  
 Diamond Grinder Co., Cedar Falls, Ia.  
 Diamond Iron Works (Mill and transmission mach'y), 1704-28 Second St., N., Minneapolis, Minn.  
 Diamond Machine Co. (Grinding machines), 9 Coddling St., Providence, R. I.  
 Diamond Machine Co. (Pumps), Monongahela, Pa.  
 Diamond Machine Co. (Steam generators), 3d and Vine Sts., Cincinnati, O.  
 Diamond Power Specialty Co. (Flue cleaners), 10340 Oakland St., Detroit, Mich.; Chicago, Philadelphia, Buffalo, Montreal, New York, Boston, Pittsburgh, St. Louis, San Francisco, Kansas City, Cleveland, Cincinnati.  
 ♦ Diamond Rubber Co., Inc. (Mechanical rubber goods), 227 W. 57th St., Akron, O.; New York, Philadelphia, Chicago, St. Louis, San Francisco.  
 ♦ Diamond Saw & Stamping Works (Hack saws), 357-361 Seventh St., Buffalo, N. Y.; 322 Monadnock Bldg., San Francisco.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Diamond State Fibre Co. (Fibre goods), Bridgeport, Pa.; W. Conshohocken, Pa.; Chicago; New York; Philadelphia; Cleveland; Boston; Detroit; San Francisco; St. Louis; Washington, D. C.  
 Diamond Textile Machine Works (Textile mach'y), 1436-28 N. 9th St., Philadelphia, Pa.  
 Diamond Tool & Die Works (Lathe tools), 438 Asylum St., Hartford, Conn.  
 Dick Bros., Inc. (Plumbers' brass goods), Reading, Pa.  
 ♦ Dick, R. & J., Co., Inc. (Belting), Passaic, N. J.; 111 St. Clair Ave., Cleveland; 63 W. Lake St., Chicago; 1512 Main St., Kansas City; 55 Barclay St., New York; 136 N. 7th St., Philadelphia, Pa.; 711 Tchoupitoulas St., New Orleans; 557 Mission St., San Francisco, Cal.; Maritime Bldg., Seattle; 920 Main St., St. Louis.  
 Dicke Tool Co., The (Hand tools), Downers Grove, Ill.; New York; Los Angeles; Chicago.  
 Dickey Mfg. Co. (Lubricators), Columbus, Ind.  
 Dickey, H. H. & Son (Leather belting), Lewiston, Me.  
 Dickinson, Inc., Paul (Ventilators), 3346 S. Artesian Ave., Chicago, Ill.  
 Dickinson, Thos. L. (Emery wheel dressers), 36 Gold St., New York, N. Y.

- Dickow, Fred C. Machinery Co., Inc. (Index centers), 3504-12 West Lake St., Chicago, Ill.
- Diehl Mfg. Co. (Electric motors), Elizabeth, N. J.; 149 Broadway, New York; 1305 Race St., Philadelphia; 566 Atlantic Ave., Boston; 1017 W. Jackson Blvd., Chicago.
- Dienelt & Eisenhardt, Inc. (Power hammers), 1304 Howard St., Philadelphia, Pa.
- Diener, Geo. W., Mfg. Co. (Hardware, tools, sheet metal goods), 400 Monticello Ave., Chicago, Ill. (See index to advertisement, pages 7, 8 and 9).
- Dietz, Fred, Co., The (Mill trucks), Indianapolis, Ind.
- Dietz, R. E., Co. (Lanterns and lamps), 60 Laight St., New York, N. Y.
- Dietzgen, Eugene, Co. (Engineers' instruments), 166 W. Monroe St., Chicago, Ill.; New York, N. Y.
- Dikeman Mfg. Co., The (Hand tools), South Norwalk, Conn.
- Dill, T. C., Machine Co. (Slotting machines), Somerset and Mascher Sts., Philadelphia, Pa.
- Dillon, D. M., Steam Boiler Works (Steam boilers), Fitchburg, Mass.; 30 Church St., New York, N. Y.
- Dillon Electric Co., The (Electric grinders), Canton, O.
- Dings Magnetic Separator Co. (Magnets and separators), 52 Vanderbilt Ave., New York; 1713 California St., Denver; 805 Hammond Bldg., West Detroit; 1907 Main St., Richmond.
- Direct Separator Co. (Power plant fittings), 220 Marcellus St., Syracuse, N. Y.
- ♦ Diaston, Henry, & Sons, Inc. (Saws), Tacony, Philadelphia, Pa.; Boston; 570 W. Washington Blvd., Chicago; Cincinnati, New Orleans, Memphis, Vancouver, San Francisco, Seattle, Portland, Spokane, Toronto.
- Divekey Bros. (Sink pumps), 336 River St., Aurora, Ill.
- Divine Bros. Co. (Truck wheels), Utica, N. Y.; 39 Cortlandt St., New York, N. Y.
- Dixie Electro Magnet Co. (Lifting magnets), Memphis, Tenn.
- Dixie Logging Tool Co. (Logging tools), Chattanooga, Tenn.
- Dixie Mfg. Co. (Blow pipe systems), Baltimore, Md.
- Dixie Packing Co., The (Packings), Atlanta, Ga.
- Dixon, Joseph, Crucible Co. (Graphite products), Jersey City, N. J.; 347 John Hancock Bldg., Boston; 68 Reade St., New York; 53 W. Jackson Blvd., Chicago; Philadelphia; St. Louis; San Francisco; Buffalo; Atlanta.
- Dixon Valve & Coupling Co. (Hose couplings), 11th and Race Sts., Philadelphia, Pa.
- Doak Gas Engine Co. (Gas engines), Oakland, Cal.
- Doane Mfg. Co. (Tool handles), Alls Station, Boston, Mass.
- Dobbins Core Drill Co., Inc. (Core drills), 147 West 42d St., New York.
- Dobson, William (Molders' tools), 211 Spencer St., Canastota, N. Y.
- Dobbie Foundry & Machine Co. (Hoisting apparatus), Portage Road, Niagara Falls, N. Y.; 72 Warren St., New York.
- Dodds, Alexander, Co. (Woodworking mach'y), 451-3 Monroe Ave., N.W., Grand Rapids, Mich.
- ♦ Dodge Sales & Engineering Co. (Power transmission mach'y), Mishawaka, Ind.; 214 S. Clinton St., Chicago; 137 Purchase St., Boston; 21 Murray St., New York; 128 W. 3d St., Cincinnati; 815 Arch St., Philadelphia; 337 Second Ave., Pittsburgh; 408 N. 4th St., St. Louis; 100 N. Third St., Minneapolis; 28 S. Forsyth St., Atlanta; 170 Pine St., Providence; 281 Market St., Newark, N. J.; 522 First Ave., So. Seattle, Wash.; Busch Bldg., Dallas, Tex.
- Doelger & Kirsten (Power shears), 505-7 Cedar St., Milwaukee, Wis.
- Doermann-Roehrer Co. (Belt dressing, etc.), 318 East 3d St., Cincinnati, O.
- Doerr Glass Co. (Gage glasses, towel bars, etc.), Vineland, N. J. (See index to advertisements, pages 7, 8 and 9.)
- Dole Valve Co., The (Heating specialties), 1923-33 Carroll Ave., Chicago, Ill.
- D'Oillier Centrifugal Pump & Machine Co. (Steam pumps), Morris Bldg., Philadelphia, Pa.
- Doman, H. C., Co., The (Marine engines), Oshkosh, Wis.
- Domestic Engine & Pump Co. (Engines and pumps), Shippenburg, Pa.
- Dominion Asbestos and Rubber Corp. (Packings, etc.), 154 Nassau St., New York; Pittsburgh, Cincinnati, Baltimore, Chicago, Detroit, Norfolk, Allentown, Albany, Philadelphia, Atlanta, San Francisco, Indianapolis, Los Angeles, Seattle.
- Donaldson Iron Co. (Cast iron pipe), Emaus, Pa.
- Dondero & Nelson (Trays), 242 E. 6th St., Portland, Ore.
- Donelan & Swift (Engines and specialties), 6 Murray St., New York, N. Y.
- ♦ Donnelley, R. R., & Sons Co. (Jobbers' catalogs), 731 Plymouth Ct., Chicago, Ill. (See index to advertisements, pages 7, 8 and 9.)
- Donnelly Mfg. Co. (Vacuum valves), 29 Mills St., Malden, Mass.
- Donnelly Systems Co. (Heating systems), 9 Murray, New York.
- Donoghue, James (Soldering presses), 1407 E. 11th St., Cleveland, O.
- Donovan, D. A. (Pipe hangers), Auburn, N. Y.
- Doody Vapor Heating Co., Inc., The (Heating appliances), 46 Cornhill St., Boston, Mass.
- Doolittle, L. G. (Flue cleaners, etc.), 1 Sturgis St., Binghamton, N. Y.
- Doran Mfg. Co. (Gasoline pumps, etc.), 3100 N. Rockwell St., Chicago, Ill.
- Dorethy, Inc., W. S. (Iron and steel forgings), 357 West St., New York.
- Dorman, John H. (Tapping attachment), 1 Bethune St., New York, N. Y.
- Double Service Packing Co. (Packers), 246 Chestnut St., Philadelphia, Pa.
- Dougherty, Owen T. (Sewer covers), 2423 University Ave., St. Paul, Minn.
- Douglas, John, Co. (Plumbing supplies), Cincinnati, O.; Syracuse, Philadelphia, Washington, Atlanta, New Orleans, Detroit, Chicago.
- Douglas, W. & B. (Pumps), Middletown, Conn.; 87 Warren St., New York.
- Dover Stamping & Mfg. Co. (Sheet metal goods), Cambridge, Mass.
- Dow, Inc., L. B. (Transmission mach'y), Keene, N. H.
- Dow Pump & Diesel Engine Co. (Pumping engines), San Francisco, Cal.
- Dowd, R. J., Knife Works (Machine knives), Beloit, Wis.
- Down Tool Works, Inc. (Twist drills), Fleetwood, Pa.
- Downey Boiler Works, T. F. (Grate bars), 2600 W. Grand Ave., Chicago, Ill.
- Downey Heating & Sup. Co. (Heating boilers), 613 Sycamore St., Milwaukee, Wis.
- Dragon Mfg. Co., The (Leather packings), Marietta, O.
- Draher, John (Power presses), 70 N. Elm St., Waterbury, Conn.
- Drake Mfg. Co. (Fire extinguishers), 143 Reed St., Milwaukee, Wis.
- Drake, W. H., Co., The (Heating boilers), 36 Clinton St., Newark, N. J.
- Drake-Williams-Mount Co. (Boilers, tanks, etc.), 23rd, Hickory and U. P. R. R., Omaha, Neb.
- Draper Mfg. Co., The (Valves, fittings, tools, etc.), Port Huron, Mich.; Petrolea, Canada.
- Draper Mfg. Co. (Steel barrels), 3603 E. 91st St. and Crane Ave., Cleveland, O.; 203 Pan American Bldg., New Orleans.
- Draper & Hall Co. (Grinders), Middletown, Conn.
- Dreher, Ernest A. (Plumbers' traps), 42 Walnut St., Newark, N. J.
- Dreis & Krump Mfg. Co. (Sheet metal machines), 2905 S. Halsted St., Chicago, Ill.; 508 Mission St., San Francisco.
- Dresses Machine Tool Co. (Lathes and drills), 227-29 W. McMicken Ave., Cincinnati, O.
- Dresser, S. R., Mfg. Co. (Oil well supplies), Bradford, Pa.
- Driggs Ordnance & Mfg. Corp. (Engine lathes), 149 Broadway, New York.
- Driver, C. H., & Kerr Co. (Tool racks), 1319 16th St., Racine, Wis.
- Driver-Harris Wire Co. (Wire), Harrison, N. J.; 28 S. Jefferson St., Chicago.
- Drop Forging Co. of N. Y., The (Wrenches), West Side Ave. and Fisk St., Jersey City, N. J.
- Druid Oak Belting Co., Inc., The (Belting), 111 E. Lombard St., Baltimore, Md.; 239 Franklin St., Boston; 112 E. Broad St., Greenville, S. C.
- Drum, S. R., Mfg. Co. (Pump valves), 2909 S. Wabash Ave., Chicago, Ill.
- Drummond, M. J., & Co. (Iron pipe, hydrants, etc.), 51 Chambers St., New York, N. Y.
- Dubois, F. N., & Co., Inc., The (Plumbing supplies), 243-247 Ninth Ave., New York, N. Y.
- Du Bois Iron Works (Pumps, engines), 805 Broad St., Du Bois, Pa.
- Dudgeon, Richard (Hydraulic jacks, etc.), Broome and Columbia Sts., New York, N. Y.
- Duemler, G. Frank (Orsats), Olney Sta., Philadelphia, Pa.
- ♦ Duff Mfg. Co., The (Jacks, etc.), Pittsburgh, Pa.; 50 Church St., New York; Peoples Gas Bldg., Chicago; Candler Bldg., Atlanta; Monadnock Bldg., San Francisco; Houston; St. Louis.
- Dukerschien, L. W., Heating & Ventilating Co. (Radiator valves), Oshkosh, Wis.; 271 Main St., Ashland, Wis.
- Dull, Raymond W., Co. (Gravel plant equipment), 1912 Conway Bldg., Chicago, Ill.
- Duluth Show Case Co. (Store fixtures), Duluth, Minn.
- Duluth Water Heater Co. (Water heaters), Duluth, Minn.
- Du Mond, A. A. (Smoke test machines), 45 W. 34th St., New York, N. Y.
- Duner Co. (Railway water closets), 101 S. Clinton St., Chicago, Ill.
- Dunham, C. A., Co. (Heating specialties), Chicago, Ill. Fifty-two branches in principal cities.
- Dunker Supply Co. (Pattern shop supplies), Canton, O.
- Dunn Mfg. Co. (Pipe chain), Oxnard, Cal.

- Dunn, W. E., Mfg. Co. (Oil engines), Holland, Mich.  
 Dunning & Boschert Press Co., Inc. (Hydraulic mach'y), Syracuse, N. Y.  
 Dunning, W. D. (Core and mixers), Syracuse, N. Y.  
 Dunstane Brass Mfg. Co. (Plumbers' brackets), Concord, N. H.  
 Duntun, M. W., Co., The (Soldering flux), 150 Niagara St., Providence, R. I.  
 Duplex Engine-Governor Co., The (Gas engine governors), 36 Flatbush Ave. Extension, Brooklyn, N. Y.; Detroit, Chicago.  
 Duplex Mfg. Co. (Pumps, windmill, etc.), Sta. B, Superior, Wis.  
 Duplex Mfg. & Foundry Co. (Sewer castings), Elyria, O.  
 Duplex Mfg. Co. (Plumbers force pumps, etc.), 214 N. 13th St., Philadelphia, Pa.  
 Duplex Moulding Sander Co. (Sanding machines), Hornell, N. Y.  
 ♦ Du Pont, E. I., de Nemours Powder Ct. (Explosives), 10th & Market Sts., Wilmington, Del.; Brown-Marx Bldg., Birmingham; Prudential Bldg., Buffalo; McCormick Bldg., Chicago; Central Savings Bank Bldg., Denver; Fidelity Bldg., Duluth; Robson-Pritchard Bldg., Huntington, W. Va.; Equitable Bldg., 120 Broadway, New York City; May Bldg., Pittsburgh; 244 Stark St., Portland, Ore.; Traders Nat'l Bank Bldg., Scranton; Maynard Bldg., Seattle; 523 First Ave., Spokane; Wright Bldg., St. Louis; Springfield, Ill.; Mexico, City, Mex.; Frisco Bldg., Joplin, Mo.  
 Du Pont, E. I., de Nemours Powder Co., By-Product Division (Metals, salts, oil tar, etc.), Wilmington, Del.  
 Du Pont Frabrikoid Co. (Artificial leather), Du Pont Bldg., 10th & Market Sts., Wilmington, Del.; Equitable Bldg., 120 Broadway, New York; 1933 Dime Bank Bldg., Detroit.  
 Du Pont Chemical Works (Chemicals and chemical products), 120 Broadway, New York, N. Y.  
 Durable Mfg. Co., (Gaskets, packings, etc.), 114 Liberty St., New York, N. Y.; 339 W. Madison St., Chicago, Ill.; Dallas, San Francisco, Pittsburgh.  
 Durable Wire Rope Co. (Wire rope), 95 Pearl St., Boston, Mass.; 43 South St., New York, N. Y.; 165 W. Lake St., Chicago, Ill.  
 Durand-Koering Glass Co., Inc. (Gauge glasses), Vineland, N. J.  
 Durand Steel Locker Co. (Metal furniture), 76 W. Monroe St., Chicago, Ill.; 132 Nassau St., New York; 76 Sacramento St., San Francisco, Cal.  
 Durant Mfg. Co. (Counting machines), 655-665 Buffum St., Milwaukee, Wis.  
 Durbin Co., The (Pipe joints), 21st St. and Bond Ave., East St. Louis, Ill.  
 Durbrow & Hearne Mfg. Co. (Counting machines), 12 Wooster St., New York, N. Y.  
 Duriron Co., Inc. (Pipe and fittings), Dayton, O.; Atlanta; Chicago; Cleveland; Denver; New York; Salt Lake City; San Francisco; Montreal; Pittsburgh.  
 Duro Pump & Mfg. Co. (Pumps), Dayton, O.; 610 Wrigley Bldg., Chicago; Grand Central Palace, New York.  
 Duryea Mfg. Co. (Cotton belting), Avenue C. and 2d St., Bayonne, N. J.; 605 S. Dearborn St., Chicago; 120 Milk St., Boston; 14 Southern Express Bldg., Memphis.  
 Dutcher Machine Co. (Gas engines), Fulton, N. Y.  
 Dutton, C. H., Co. (Engines and boilers), Grace St., Kalamazoo, Mich.  
 Dwight Mfg. Co. (Power plant specialties), 565 W. Washington Blvd., Chicago.  
 Dyer Co., The (Welding apparatus), Cambridge, Mass.
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- Eagle Belting Co. (Leather belting), 558 W. Randolph St., Chicago, Ill.  
 Eagle Bolt & Forging Company, The (Bolts and forgings), East 45th and Superior Sts., Cleveland, O.  
 ♦ Eagle Counter & Leather Co. (Leather belting), 414 East 8th St., Cincinnati, O.; Indianapolis; New Orleans, La.; Columbus, Dayton.  
 Eagle Emery & Corundum Wheel Co., The (Abrasive wheels), 716-717 S. Robey St., Chicago, Ill.  
 Eagle Mfg. Co. (Oilers, etc.), Wellsburg, W. Va.  
 Eagle Oil & Supply Co. (Packings, lubricants), 44-45 India St., Boston, Mass.; New York; Chicago.  
 Eagle Packing & Rubber Co., Inc. (Packings, etc.), 61 Warren St., New York, N. Y.  
 Eagle Paint & Varnish Co. (Paints), 225 Galveston St., Pittsburgh, Pa.  
 Eagle Pipe Supply Co., Inc. (Railings and fittings), 30 Church St., New York, N. Y.  
 Eagle-Picher Lead Co., The (Roof flanges), 208 S. La Salle St., Chicago, Ill.; 1006 Broadway, Cincinnati, Ohio.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Eagle Saw Works (Circular saws), Chattanooga, Tenn.  
 Eagle Tank Co. (Tanks and towers), 2432 N. Crawford Ave., Chicago, Ill.  
 Eagle Smelting & Refining Works (Babbitt metal), 233 Broadway, New York, N. Y.
- Earle Gear & Machine Co. (Machines, metal sawing), Stenton and Wyoming Aves., Philadelphia, Pa.  
 East Bangor Consolidated Slate Co. (Sinks, stalls, etc.), East Bangor, Pa.  
 East Iron & Machine Co., The (Pumps), Lima, O.; 45 W. 18th St., New York.  
 East Jersey Pipe Co. (Steel pipe), 50 Church St., New York, N. Y.  
 Eastern Bolt & Nut Co. (Bolts, nuts, screws, etc.), Providence, R. I.  
 Eastern Felt Co. (Mechanical felts), Canal St., Winchester, Mass.  
 Eastern Machinery Co., The (Friction clutches), New Haven, Conn.  
 Eastern Machinery & Equipment Co., Inc. (Leather packings), Commercial Trust Bldg., Philadelphia, Pa.  
 Eastern Machine Screw Corp., The (Screw machine products), Truman and Barclay Sts., New Haven, Conn.  
 Eastern Specialty Mfg. Co. (Rubber tank bulbs), 1553 Dickson Ave., Scranton, Pa.  
 Eastern Supply & Mfg. Co. (Pipe nipples), Shoemakersville, Pa.  
 Eastern Tube & Tool Co., Inc. (Chucks), 594 Johnson Ave., Brooklyn, N. Y.  
 Eastham Soil Pipe & Foundry Co. (soil pipe), Anniston, Ala.  
 Easton Car & Construction Co. (Industrial cars), Northampton Nat'l Bank Bldg., Easton, Pa.; 141 Milk St., Boston, Mass.; 403 Vinton Bldg., Detroit, Mich.; 30 Church St., New York.  
 East Penn Foundry Co. (Plumbing brass goods), Macungie, Pa.  
 Eastwood, Benjamin, Co. (Power trans. mach'y), 800-322 Straight St., Paterson, N. J.  
 Eastwood Wire Mfg. Co. (Power plant fittings), Belleville, N. J.  
 Easy Mfg. Co., The (Pipe pushers), David City, Neb.  
 Eaton, H. B. & Co. (Taps), 144 Pearl St., Boston.  
 Ebinger, D. A., Sanitary Mfg. Co., The (Urinals and closets), 180-200 Lucas St., Columbus, O.; Minneapolis, New York.  
 Eck Dynamo & Motor Co. (Dynamos and motors), Belleville, N. J.; 32 Warren St., New York.  
 Eclipse Feed Water Heater & Purifier Co. (Feed water heaters), Oshkosh, Wis.  
 Eclipse Fuel Engineering Co. (Gas furnaces), Rockford, Ill.  
 Eclipse Pulley Covering Co., The (Pulley covering), 537 S. Dearborn St., Chicago, Ill.; Detroit; St. Louis; Cincinnati; Cleveland.  
 Eclipse Seat Co. (Closet seats), Far Rockaway, N. Y.  
 Eclipse Wood Pulley Co., Inc., The (Wood pulleys), Berlin, Pa.  
 Eco Clock Co. (Watchmen's clocks), 197 Congress St., Boston, Mass.; New York, N. Y.; Buffalo; Atlanta; San Francisco.  
 Economy Raler Co. (Baling presses), Ann Arbor, Mich.; Boston, Chicago, New York, Philadelphia, Syracuse; Atlanta; Cincinnati; Columbus; Indianapolis.  
 Economy Boiler Co. (Heating boilers), Willmar, Minn.  
 Economy Concrete Co. (Laundry trays), New Haven, Conn.  
 Economy Drawing Table Mfg. Co. (Drawing tables), Adrian, Mich.  
 Economy Engineering Co. (Hoists and cranes), Willoughby, Ohio.  
 Economy Engineering Co. (Portable elevators), 2647 W. Van Buren St., Chicago, Ill.; 527 Canadian Pacific Bldg., New York.  
 Economy Excavator Co. (Excavating machines), Box 717, Iowa Falls, Iowa.  
 Economy Faucet Co. (Steam water heaters), 86 Weybosset St., Providence, R. I.  
 (See index to advertisement pages 7, 8 and 9.)  
 Economy Fuse & Mfg. Co. (Fuses), 2723 Greenview Ave., Chicago, Ill.; Boston, New York, Philadelphia, Buffalo, Cleveland, Pittsburgh, Detroit, St. Louis, San Francisco, Atlanta, Baltimore, Cincinnati, Denver, Milwaukee, Minneapolis, Seattle, Los Angeles.  
 Economy Gas Machine Co. (Gasoline lamps, etc.), 80 N. Water St., Rochester, N. Y.  
 Economy Hang-Up Soap Co. (Soap), 136 W. Lake St., Chicago, Ill.  
 Economy Heater Co. (Water heaters), 406, 108 S. La Salle St., Chicago, Ill.  
 Economy Lubricating Co. (Lubricants), Dorrance and Temple Sts., Charlestown Dist., Boston, Mass.  
 Economy Oil Co. (Lubricants), 542 W. 18th St., Chicago, Ill.  
 Economy Pottery Co. (Sanitary earthenware), Trenton, N. J.  
 Economy Pumping Machinery Co. (Power pump), 122-124 N. Curtis St., Chicago, Ill.  
 Economy Scale Remover Co. (Boiler compounds), Chicago Heights, Ill.  
 Economy Vapor Heating Co. (Vacuum valves), Merchants' Nat'l Bank Bldg., Omaha, Neb.  
 Economy Welding Machine Co. (Welding outfits), Southwest Blvd. and Central St., Kansas City, Mo.



- Economy Wiping Materials Co., Inc. (Waste), 453-5 W. 16th St., New York, N. Y.
- Eddy Engineering Co. (Vacuum valves), Alpena, Mich.; Mason, Mich.
- Eddy, Geo. M., & Co. (Measuring tapes), 351 Classon Ave., Brooklyn, N. Y.
- Eddy, R. M., Foundry Co. (Sewer castings), 372 W. Grand Ave., Chicago, Ill.
- Eddy Valve Co. (Valves), Waterford, N. Y.; 2 Rector St., New York.
- Edelmann, E., & Co. (Auto specialties), 2638 No. Crawford Ave., Chicago, Ill.; New York; Los Angeles.
- Edelstone, Wm. W., Fabric Co. (Cotton fabric), 116 Bedford St., Boston, Mass.
- Edge, Frank, & Co. (Band saw blades), 327 Front Ave., N.W., Grand Rapids, Mich.
- Edgecombe Co., The (Pipe cement), Cuyahoga Falls, O.; 75 Westminster St., Providence, R. I. (See index to advertisement, pages 7, 8 and 9.)
- Edgecombe, J. C., & Co. (Pump valves), 149 Broadway, New York, N. Y.
- Edgemont Machine Co., The (Friction clutches), 2200 Home Ave., Dayton, O.
- Edge Moor Iron Co. (Power boilers), Edge Moor, Del.; 79 Milk St., Boston; 10 S. La Salle St., Chicago; 2007 Trinity Bldg., New York.
- Edgertine Aniline Corp. (Carbide), 118 William St., New York.
- Edison Electric Appliance Co., Inc. (Heaters), 5660 West Taylor St., Chicago, Ill.
- Edison Packing & Sales Co. (Packing), 234 State St., Boston, Mass.
- Edlund Machinery Co., Inc. (Drilling machines), Cortland, N. Y.
- Edna Brass Mfg. Co., The (Steam brass goods), 525-31 Hunt St., Cincinnati, O.
- Edson Mfg. Co. (Diaphragm pumps), 375 Broadway, Boston, Mass.
- ♦ Edward Valve & Mfg. Co., The (Valves, etc.), East Chicago, Ind.; Boston, Mass.; New York; Pittsburgh; San Francisco.
- Edwards, H. D., & Co. (Tackle blocks), 140 Woodward Ave., Detroit, Mich. (See index to advertisement, pages 7, 8 and 9.)
- Edwards, Joseph, & Co. (Centrifugal pumps), 827 E. 9th St., New York City.
- Edwardsville Brass Works (Plumbers' brass goods), Edwardsville, Ill.
- Efficiency Device Corp. (Wrenches), 173-177 Lafayette St., New York.
- Efficient Vise & Wrench Co. (Pipe Wrenches), 4207 Clark Ave., Cleveland, O.
- Egan, K. Francis X., Corp. (Cotton waste), 20-22 Bergen St., Brooklyn, N. Y.
- Eggers, Wm. J. (Rubber moulds), 294 Taaffe Pl., Brooklyn, N. Y.
- Ehrmann & Bahlsen (Emery wheel dressers), 35 Nassau St., New York, N. Y.
- Ehret Magnesia Mfg. Co. (Asbestos products), Valley Forge, Pa.; Land Title Bldg., Philadelphia; 51 W. 3rd St., New York; 20 E. Jackson St., Chicago.
- Eichman, J. C., Mfg. Co. (Water closet seats and tanks), Bush and Iconoco Sts., Baltimore, Md.
- Eierman Floor Scraper Co., (Plumbers' spades), 1981 Fulton, Brooklyn, N. Y.
- ♦ Elaterite Paint & Mfg. Co. (Paints), Des Moines, Ia.
- ♦ Electric Alloy Steel Co., The (Steel), Youngstown, Ohio.
- Electric Blower Co. (Blowers), 352 Atlantic Ave., Boston, Mass.
- Electric Boiler Corp. (Water heaters), Cambridge, Mass.
- Electric Brazing & Welding Machine Co., Inc. (Brazing machines), 30 Church St., New York, N. Y.
- Electric Controller & Mfg. Co. (Controllers and couplings), 2700 E. 79th St., Cleveland, O.; New York; Pittsburgh; Chicago; Birmingham; Canada.
- Electric Emery Wheel Co., The (Abrasive wheels), 827 Broad St., Newark, N. J.
- Electric Furnace Co. (Electric furnaces), Alliance, O.; New York, N. Y.
- ♦ Electric Hose & Rubber Co. (Hose), 12th and Dure Sts., Wilmington, Del.; New York; Philadelphia; New Orleans; Boston; Cleveland; Chicago.
- Electric Specialty Co. (Motors and dynamos), Stamford, Conn.
- Electric Specialty Mfg. Co. (Pipe locators), Cedar Rapids, Ia.
- Electric Water Sterilizer & Ozone Co. (Sterilizers), Scottsdale, Pa.; 112 Market St., San Francisco.
- Electric Wheel Co. (Logging wheels), Quincy, Ill.
- Electro Dynamic Co. (Motors), Bayonne, N. J.; Philadelphia; Pittsburgh; Chicago.
- Electro-Magnetic Tool Co. (Electric hammers), 2902 Carroll Ave., Chicago, Ill.
- Electro-Stylograph Co., The (Stylographs for writing on metal), 17 Madison Ave., New York, N. Y.
- Elgin Brass Co., The (Plumbers' brass goods), 5917 Euclid Ave., Cleveland, O.
- Elgin Tool Works, The (Lathes, etc.), Elgin, Ill.
- Elgin Wind Power & Pump Co. (Windmills), Elgin, Ill.; Kansas City, Mo.; Sioux City; Minneapolis.
- Elite Mfg. Co. (Concrete mixers), Ashland, O.
- Elite Pottery Co. (Sanitary earthenware), Trenton, N. J.
- Eljer Co. (China plumbing fixtures), Cameron, W. Va.; 1000 Michigan Ave., Chicago.
- Elkay Mfg. Co. (Sinks and drain boards), 606 N. Sangamon St., Chicago, Ill.
- Elkhart Brass Mfg. Co. (Hose fittings, etc.), 908 Prospect St., Elkhart, Ind.
- Elkhart Foundry & Machine Co. (Sewer castings), Elkhart, Ind.
- Elkhart Iron Works (Sewer castings), 2002-2020 S. Main St., Elkhart, Ind. (See index to advertisement, pages 7, 8 and 9.)
- Elkhart Rubber Works (Mechanical rubber goods), Oakland Ave., Elkhart, Ind.
- Ellert, C. H., Mfg. Co. (Belt dressing, etc.), 1125 Elliott St., Evansville, Ind.
- Elliott Company (Power plant specialties), Jeanette, Pa.; Boston; New York; Philadelphia; Pittsburgh; Cleveland; Cincinnati; Detroit; Chicago; St. Louis; Kansas City; Minneapolis; Richmond; Denver; New Orleans; San Francisco.
- Elliott, B. K., Co. (Blue print machines), 126 Sixth St., Pittsburgh; 737 Prospect Ave., Cleveland.
- Elliott Water Heater Co., Inc. (Gas water heaters), 9 Willoughby St., Brooklyn, N. Y.
- Ellis-Smith Mfg. Co., Inc. (Auto jacks), 216 Niagara St., Buffalo, N. Y.
- Ellison, Lewis M. (Pressure gauges), 214 W. Kinzie, Chicago, Ill.
- Elmer, H. N. (Miners' helmets), 1641 Monadnock Bldg., Chicago, Ill.; 268 Market St., San Francisco, Cal.
- Elmes, Chas. F., Engineering Works (Hydraulic mach'y), 234 N. Morgan St., Chicago, Ill.
- Elmore, Walter D. (Metal babbitt), Bessemer Bldg., Pittsburgh, Pa.
- Elwell-Parker Electric Co., The (Factory trucks), Cleveland, O.
- Ellwood Ivins Tube Works (Tubing), Oak Lane Station, Philadelphia, Pa.; 645 Washington Blvd., Chicago.
- Elyria Enameled Products Co. (Kettles, tanks), Elyria, Ohio.
- Elyria Gas Power Co. (Engines), Elyria, O.
- Elyria Iron & Steel Co. (Steel tubing), East 181st St., Cleveland, O.; Peoples Gas Bldg., Chicago; Candler Bldg., Atlanta.
- Elyria Machine Co. (Lathes), Elyria, Ohio.
- Embury Mfg. Co. (Lanterns), Warsaw, N. Y.
- Emerson-Brantingham Co. (Engines), Rockford, Ill.; Auburn; Columbus; Dallas; Des Moines; Harrisburg; Indianapolis; Kansas City; Minneapolis; Omaha; Peoria; Rockford; St. Louis; Sioux Falls, S. D.
- Emerson Electric Mfg. Co., The (Fans, blowers, lathes), 2024-32 Washington Ave., St. Louis, Mo.; 50 Church St., New York.
- Emerson Pump & Valve Co., Inc. (Steam pumps), Alexandria, Va.
- Emery Candle Co. (Candles), Cincinnati, O.; 1748 Woolworth Bldg., New York.
- Emery, William S. (Water closets), 121 E. 27th St., New York, N. Y.
- Emmer Mfg. Co. (Vices), Waynesboro, Pa.
- Empire Brass Mfg. Co., The (Plumbing brass goods), 10801 Berea Road, N. W., Cleveland, O.
- Empire Brush works (Machine brushes), 1811 N. Robey St., Chicago, Ill.
- Empire Level Mfg. Co. (Levels), 315 First Ave., Milwaukee, Wis.
- Empire Machine Works (Woodworking mach'y), Mt. Morris, N. Y.
- Empire Mfg. Co. (Lumber trucks), Quincy, Ill.
- Empire Mfg. Co., The (Hose and belting), 97 Spring St., Lockport, N. Y.
- Empire Metal Co. (Metals), Syracuse, N. Y.
- Empire Pipe Corporation (Pipe bends), 235-253 Park Ave., Brooklyn, N. Y.
- ♦ Empire Tire & Rubber Co. (Mechanical) rubber goods), Trenton, N. J.; 1623 Michigan Ave., Chicago; 179 Massachusetts Ave., Boston; 240 W. 55th St., New York; 852 Main St., Buffalo, N. Y.; 810 N. Broad St., Philadelphia, Pa.; 5852 Baum Blvd., Pittsburgh, Pa.
- Enamo Products Co. (Bathroom accessories), 502 W. 32nd St., New York, N. Y.
- Endura Mfg. Co. (Packings), 6302 Eastwick Ave., Philadelphia, Pa.; 909 Majestic Bldg., Detroit; 19 Park Pl., New York; 403 Rialto Bldg., San Francisco.
- Energetic Printing Co. (Shop labels), 44 N. 4th St., Philadelphia, Pa.
- Energy Elevator Co. (Freight and pass. elevators), 214 New St., Philadelphia, Pa.
- Engberg's Electric & Mechanical Works (Dynamoes, etc.), St. Joseph, Mich.
- Engel Mfg. Co. (Ball cocks), 239 W. Genesee St., Syracuse, N. Y.
- Engelhard, Charles (Thermometers), 30 Church St., New York, N. Y.
- Engineering Company of Philadelphia (Columns, water safety), Harrison Bldg., Philadelphia.



- Engineering Supply Co. (Boiler compound), 3307 York Road, Philadelphia, Pa.
- Engineer Co., The (Forced draft system), 17 Battery Pl., New York, N. Y.
- English Iron Works Co. (Engines and boilers), 410 W. 5th St., Kansas City, Mo.
- Ensign Bickford Co. (Blasting fuses), Simsbury, Conn.
- Ensign Refining Co. (Lubricants, etc.), 10611 Quebec Ave., S.E., Cleveland, O.
- Enterprise Co., The (Steam engines), Columbiana, O.; 90 West St., New York, Minneapolis.
- Enterprise Foundry & Machine Works (Mine car wheels), Bristol, Conn.
- Enterprise Machinery Co. (Gas engines), 1601 8th St., S. E., Minneapolis, Minn.
- Enterprise Machinery Co., The (Punch and drill presses), 30 S. Clinton St., Chicago, Ill.
- Enterprise Oil Company (Lubricants), 164 Chandler St., Buffalo, N. Y.
- Equipment Mfg. Co. (Factory trucks), Leader-News Bldg., Cleveland, O.; New York, Chicago.
- Equipolse Rivet Co., The (Rivets and bolts), Waterbury, Conn.
- Equithern Control Corp. (Regulators), 13 Tillary St., Brooklyn, N. Y.
- Equitable Meter Co. (Gas meters), 422 First Ave., Pittsburgh, Pa.
- Equitable Powder Co. (Explosives), East Alton, Ill.
- Erb, W. B., & Co. (Pumps), 529-532 W. Van Buren St., Chicago, Ill.
- Erbestos Brake Lining Co. (Brake lining), 4001 N. 5th St., Philadelphia, Pa.
- Erd Motor Co. (Gasoline engines), Saginaw, Mich.
- Erdle Perforating Co. (Perforated metals), 171 York St., Rochester, N. Y.
- Erie-Buffalo Tube Co., The (Brass tubing), Erie, Pa.
- Erie City Iron Works (Boilers and engines), Erie, Pa.
- Erie Clutch & Pulley Co. (Transmission equipment), Erie, Pa.
- Erie Engine Works (Steam engines), Walnut and 13th Sts., Erie, Pa.; 90 West St., New York.
- Erie File Co. (Files), 935 E. 6th St., Erie, Pa.
- Erie Foundry Co. (Stokers, drop hammers, etc.), Erie, Pa.
- Erie Pump & Engine Works, Inc. (Pumps and engines), 150 Glenwood Ave., Medina, N. Y.
- Erie Tool Works, The (Steamfitters' tools), 11th and French Sts., Erie, Pa.; 126 Chambers St., New York.
- Erie White Metal Co. (Metals), 858 E. 10th St., Erie, Pa.
- Eries Stove & Mfg. Co. (Gas appliances), Erie, Pa.
- Eriksen & Demmerle (Kerosene burners), 1154 Third Ave., New York, N. Y.
- Ernst, Chas. K. (Sidewalk hoists), 1001 Ferry St., Buffalo, N. Y.
- Ernst & Co. (Heaters), 44 Oakland Ter., Newark, N. J.
- Errington Mechanical Laboratory (Chucks and dies), Broadway and John St., New York, N. Y.
- Ertel, George, Co. (Paper balers), 615-623 Kentucky St., Quincy, Ill.
- Erwin & Co. (House pumps, etc.), 3736 Cottage Grove Ave., Chicago, Ill.
- Esda Mfg. Co. (Water heaters), 280 Madison Ave., New York, N. Y.
- Espen-Lucas Machine Works (Saws and mach'y), Front St. and Girard Ave., Philadelphia, Pa.
- Essemueller Mill Furnishing Co. (Friction clutches), 1222 S. 8th St., St. Louis, Mo.
- Essex Foundry (Brass and iron plumbing goods), Murray St. and Avenue D, Newark, N. J.; 340 Hudson St., New York.
- Essex Brass Corp. (Steam brass goods), 2000 Franklin St., Detroit, Mich.
- Essex Rubber Co. (Mechanical rubber goods), Trenton, N. J.; 258 Broadway, New York.
- Essex Tool Works (Tools, gauges, fixtures), Newark, N. J.
- Estabrook's, R., Sons (Plumbing goods), First and C Sts., South Boston, Mass.
- Estate Stove Co. (Stoves, ranges, furnaces), Hamilton, O.; Minneapolis.
- Estes, E. B., & Sons (Tool handles), 362 5th Ave., New York, N. Y.
- Estes Mills (Waste), 1290 Stafford Rd., Fall River, Mass.
- Esty Sprinkler Co. (Automatic sprinklers), Laconia, N. H.
- Etna Company (Twist drills), Taunton, Mass.
- Etna Machine Co. (Punching presses), Maplewood & M.C., Ry., Toledo, O.
- Etna Mfg. Co. (Swaging machines), Toledo, O.
- Euclid Crane & Hoist Co. (Cranes and hoists), Euclid, O.
- Euclid Mfg. Co., The (Laundry trays), Paden City, W. Va.
- (See index to advertisements, pages 7, 8 and 9.)
- Euclid Stone & Brick Co., The (Laundry trays), 914 Williamson Bldg., Cleveland, O.
- Eureka Chemical Fire Pail Co. (Buckets, fire), 117 Market St., Philadelphia, Pa.
- Eureka Machine Co. (Concrete mixers), 170 Case St., Lansing, Mich.
- Eureka Packing Co. (Packings), 78-80 Murray St., New York, N. Y.
- Eureka Sander Co. (Sanding machines), Racine, Wis.
- Eureka Smokeless Furnace Co. (Fuel economizers), 1215 Chamber of Commerce, Chicago, Ill.
- Eureka Steam Trap Co. (Steam traps), 208 W. Kinzie St., Chicago.
- Eureka Water Heater Co., The (Water heaters), 37 W. Lake St., Chicago, Ill.; 215 Columbia St., Seattle.
- Eustis, J. P., Mfg. Co. (Bathroom fittings), 12-14-16 Ames St., Cambridge, Boston, Mass.
- Evans Estate, F. H. (Roofers' equipment), 33 Hewes St., Brooklyn, N. Y.
- Evans Friction Cone Co. (Countershafts), Newton Centre, Mass.
- Evans, John E. (Pump valves), Nutley, N. J.
- Evansville Gas Engine Works (Gas engines), 1230 Riverside Ave., Evansville, Ind.
- Evansville Leather & Belting Co. (Leather belting), 429-431 Sycamore St., Evansville, Ind.
- Everett, A., & Son (Metallic letters), Auburn, N. Y.
- Everhart Brass Works (Steam brass goods), Scranton, Pa.
- Ever Hot Heater Co., The (Water heaters), 214 Woodbridge St., Detroit, Mich.
- Everhot Manufacturing Co. (Torches and soldering irons), Maywood, Ill.
- Everlasting Valve Co. (Valves), 49 Fisk St., Jersey City, N. J.
- Ever Ready Mfg. Co. (Fire extinguishers), 44-46 Pearl St., Buffalo, N. Y.
- Evers, Henry A., Co. (Steel stamps), 45 Eddy St., Providence, R. I.
- Everson, C. G., & Co. (Water filters), 70 W. Lake St., Chicago, Ill.
- Evinrude Motor Co. (Gasoline engines), Milwaukee, Wis.
- Excello Mfg. Co. (Asbestos products), 2160 Superior Ave., Cleveland, Ohio.
- Excellovalve Co., Inc. (Basin cocks, valves, etc.), 1767 Broadway, New York, N. Y.
- Excelsior Leather Washer Mfg. Co. (Washers), 323-29 Cedar St., Rockford, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Excelsior Pulley Co., Inc. (Wood pulleys), Cuba, N. Y.
- Excelsior Slate Co. (Structural slate), Drawer A, Pen Argyl, Pa.
- Excelsior Steel Ball Co. (Bearings), Military Road, Buffalo, N. Y.
- Excelsior Tool & Machine Co. (Metal working tools), 30th & Ridge Ave., East St. Louis, Ill.
- Excelsior Valve Co. (Valves, packings), 106-108 Fulton Ave., New York, N. Y.
- Excelsio Specialty Works (Water heaters), 119 Clinton St., Buffalo, N. Y.
- Exeter Brass Works (Plumbing brass goods), 10 Railroad Ave., Exeter, N. H.; Henry Stein, 48 Cliff St., New York.
- (See index to advertisement, pages 7, 8 and 9.)
- Exeter Machine Works (Steam heating apparatus), Exeter, N. H.
- Exolon Company (Abrasives), Blasdell, N. Y.
- Extensive Mfg. Co., The (Filing wrenches), 116 Nassau St., New York, N. Y.
- Eynon-Evans Mfg. Co. (Injectors), 1519 Clearfield St., Philadelphia, Pa.
- Fabreeka Belting Co. (Balata belting), 113 India St., Boston, Mass.; 523 Eighth Ave., New York.
- Fabric Fire Hose Co. (Hose), Duane and Church Sts., New York, N. Y.; 124 West Lake St., Chicago.
- Faessler, J., Mfg. Co. (Boilermakers' tools), 215 N. 5th St., Moberly, Mo.
- Fafnir Bearing Co., The (Ball bearings), New Britain, Conn.; Detroit, Chicago, Cleveland, 5 Columbus Circle, New York.
- Fahrig Metal Co. (Bearing metal), 34 Commerce St., New York, N. Y.
- Fair Mfg. Co. (Machinery guards), Racine, Wis.
- Fairbanks, E. & T., Co. (Scales, valves, etc.), St. Johnsbury, Vt.
- Fairbanks, Morse & Co. (Gas engines, pumps, etc.), 900 S. Wabash Ave., near Eldredge Pl., Chicago, Ill.; Detroit, Cincinnati, Cleveland, Indianapolis, New York, St. Louis, St. Paul, Louisville, Bakersfield, Cal.; Minneapolis, Kansas City, Omaha, Denver, San Francisco, Los Angeles, Salt Lake City, Portland, Seattle, Spokane, Philadelphia.
- Fairbanks Co., The (Scales, valves, trucks), Broome and Lafayette Sts., New York, N. Y.; Albany, Baltimore, Boston, Buffalo, Hartford, New Orleans, Philadelphia, Pittsburgh, Syracuse, Birmingham, Chicago, Detroit, Newark, Paterson, Providence, Rochester, Scranton, St. Louis, Tulsa, Washington.
- Fairchild & Shelton (Soap cups), Bridgeport, Conn.
- Fairfacts Co., The (China specialties), 104 East 41st St., New York.
- Fair Haven Foundry & Machine Co. (Castings, etc.), Fair Haven, Vt.
- Fair Haven Marble & Marbleized Slate Co. (Plumbers' slate), Fair Haven, Vt.
- Fairmont Mining Machinery Co. (Mining machinery), Fairmont, W. Va.
- Falk Co., The (Gears), foot of 30th St., Milwaukee, Wis.

- Fallonite Co., The (Grinding wheels), Newtown, Pa.  
**Falls Clutch & Machinery Co.** (Power transmission machinery), Cuyahoga Falls, O.; 52-56 Purchase St., Boston; 206-208 Fulton St., New York.  
**Falls Hollow Staybolt Co.**, The (Staybolts), 21 E. Portage St., Cuyahoga Falls, O.  
**Falls Rivet Co.** (Bolts, nuts and rivets), Kent, O.; Chicago, Detroit, Cleveland, O., Philadelphia.  
**Farnasco Distributing Co.** (Oilers), Buffalo, N. Y.  
**Famous Filter Co.** (Oil filters), 116 Pine St., St. Louis, Mo.  
**Famous Mfg. Co.** (Baling presses), East Chicago, Ind.  
**Faragher, John** (Steel scaffolding), 809 S. Brooks St., Madison, Wis.  
**Faries Mfg. Co.** (Lighting fixtures), Decatur, Ill.  
**Farnan Brass Works Co.**, The (Stop and waste cocks), 1104 Center St., N. W., Cleveland, O.  
**Farnham Mfg. Co.** (Overhead trolleys), Buffalo, N. Y.  
**Farnsworth Co.** (Steam traps), Conshohocken, Pa.  
**Farnsworth Mfg. Co.** (Steam specialties), 65 Beverly St., Boston, Mass.  
**Farquhar, A. B. Co., Ltd.** (Boilers and steam engines), York, Pa.  
**Farrar Pump & Machinery Co.** (Pumps), 318 Granite Bldg., St. Louis, Mo.  
**Farrar & Trefts, Inc.** (Gas engines, etc.), 67 Perry St., Buffalo, N. Y.  
**Farrell, John, & Son** (Drum hoists), Newton, N. J.  
**Farrel Foundry & Machine Co. (Mach'y)**, Ansonia, Conn.; Sweetland Bldg., Cleveland, O.  
**Fastfeed Drill & Tool Corp.**, Clinton & Oakwood Sts., Toledo, O.  
**Fate-Root-Heath Co.** (Grinders), Plymouth, Ohio.  
**Faul, William J., Co.** (Grease and oil cups), 487 Broadway, New York, N. Y.  
**Faul & Timmins** (Gaskets), 149 Oak St., Buffalo.  
**Faultless Engine Co.** (Kerosene engines and pump jacks), 1511 Cypress St., Kansas City, Mo.  
**Fawcus Machine Co.** (Gears and castings), 2818 Smallman St., Pittsburgh, Pa.  
**Fay, J. A., & Egan Co.** (Woodworking machinery), John and Front Sts., Cincinnati, O.; Chattanooga, Chicago, New Orleans, New York, St. Louis, Cleveland.  
**Fay & Bowen Engine Co.** (Gas engines), Geneva, N. Y.  
**Fay & Scott** (Lathes), Dexter, Me.  
**Fearon-Tillotson Foundry Co.** (Grates and grate bars), 1743 N. Kenton Ave., Chicago, Ill.  
**Feather Mercury Gauge Mfg. Co.** (Mercury gauge), Bloomfield, N. J.  
**Federal Asbestos Co.** (Packings), Paterson, N. J.  
**Federal Belting Co.** (Canvas belting), Baltimore & South Sts., Baltimore, Md.  
**Federal Brass Works** (Valves and gauges), 3100 S. Kedzie Ave., Chicago, Ill.  
**Federal Brass Mfg. Co.** (Plumbing brass goods), 100 Champlain Ave., N. W., Cleveland, O.  
**Federal Electric Co.** (Fuses, sirens, etc.), 8700 State St., Chicago, Ill.; 80 Boylston St., Boston; Aspen Bldg., Denver; 115 E. Jefferson St., Detroit; 627 W. 43rd St., New York; 91 New Montgomery St., San Francisco; 1200 Pine St., St. Louis; 1627 Sansom St., Philadelphia; 203 Stamoix St., Pittsburgh; 2113 Third Ave., Birmingham, Ala.; Electric Bldg., Buffalo; 37 E. Third St., Cincinnati; 224 E. Meridian St., Indianapolis; 1417 Grand Ave., Kansas City; 134 W. Short St., Lexington, Ky.; 126 3rd St., Louisville; 179 5th St., Milwaukee; 1215 Nicollet Ave., Minneapolis; 204 Chartress St., New Orleans; 236 City Natl. Bank Bldg., Omaha; 2715 Elliott Ave., Seattle.  
**Federal Foundry Supply Co.**, The (Foundry supplies), 2639 E. 79th St., Cleveland, O.; Milwaukee, San Francisco, Seattle.  
**Federal Gauge Co.** (Pressure Gauges), 12 S. Jefferson St., Chicago.  
**Federal Graphite Mills**, The (Graphite and boiler compound), 7705 Woodland St., Cleveland, O.  
**Federal-Huber Company** (Plumbing supplies), Halsted and Fulton Sts., Chicago, Ill.; 33 W. 44th St., New York; 107 Brandon Ave., Detroit; 642 Pacific Bldg., San Francisco.  
**Federal Machine and Welder Co.** (Welders), Dana Ave., Warren, O.; Cleveland, Detroit, Chicago, Indianapolis, Minneapolis, Niagara Falls, Boston, New York, Philadelphia, Pittsburgh, San Francisco.  
**Federal Malleable Co.** (Foundry supplies), W. Allis, Wis.  
**Federal Metal Hose Corp.** (Metallic tubing), 45 N. Division St., Buffalo, N. Y.  
**Federal Metallic Packing Co.** (Packings), 48 Hanover St., Boston, Mass.  
**Federal Pressed Steel Co.** (Seamless steel products), Keefe Ave. and N. Pierce St., Milwaukee, Wis.  
**Federal Process Co.**, The (Paints, etc.), Cleveland, O.  
**Federal Radiator Co.** (Radiators and boilers), Zanesville, O.  
**Federal Steel Fixture Co.** (Metal shelving and lockers), 4645 W. Homer St., Chicago, Ill.  
**Federal Stoker Co.** (Stokers), Maple and Clark Sts., Chicago, Ill.  
**Federal Tin Co.** (Hose clamps), Charles & Barre Sts., Baltimore, Md.  
**Federal Tool & Alloy Steel Corp.** (metals), 62-76 Rutledge St., Brooklyn, N. Y.; Chicago, New Orleans.  
**Fee & Mason Mfg. Co.** (Hangers, bolts, screws, etc.), 81 Beekman St., New York, N. Y.  
**Feigl, M. & Bro., Inc.** (Glue), 185 Wooster St., New York.  
**Fellow Gear Shaper Co.**, The (Gear cutters), 23 Pearl St., Springfield, Vt.; 444 Book Bldg., Detroit.  
**Felton, Sibley & Co., Inc.** (Iron filler), 136 N. 4th St., Philadelphia, Pa.  
**Felton, S. A. & Son, Co.** (Brushes), Manchester, N. H.; 19 High St., Boston, Mass.  
**Fenn Mfg. Co.** (Tapping machines), Hartford, Conn.  
**Fenn Mfg. Co.**, The (Earth augers), N. Main St., Charlotte, Mich.  
**Fenn Ventilator Co.** (Ventilators), Boston, Mass.  
**Fensholt & Fechner** (Leather belting), 16 S. Clinton St., Chicago, Ill.  
**Fenwick-Reddaway Mfg. Co.** (Belting), Paris and Niagara Sts., Newark, N. J.  
**Ferguson, F. & Son** (Grates and grate bars), 1122-23 Clinton St., Hoboken, N. J.  
**Ferguson & Lange Foundry Co.** (Grates, boiler castings, etc.), Clybourn Ave. and Willow St., Chicago, Ill.  
**Ferracute Machine Co.** (Sheet metal mach'y), Bridgeton, N. J.  
**Ferry Cap & Set Screw Co.**, The (Screws, etc.), 2151 Scranton Rd., S. W., Cleveland, O.; 419 Book Bldg., Detroit, Mich.  
**Fess System Co.** (Oil burning equipment), 218 Natoma St., San Francisco, Calif.; 19 Central St., Providence, R. I.  
**Fibre Conduit Co.**, The (Insulating material), Orangeburg, N. Y.; 101 Park Ave., New York; 954 Monadnock Block, Chicago.  
**Fibre Finishing Co.** (Fibre washers), 73 Tremont St., Boston, Mass.  
**Fidelity Electric Co.** (Motors and grinders), Lancaster, Pa.  
**Field, Chas. H.** (Metal hammer molds), Providence, R. I.  
**Field Force Pump Co.** (Pumps), Elmira, N. Y.; 127 S. Los Angeles St., Los Angeles, Cal.; Bangor, Mich.; Rice Lake, Wis.; Waupaca, Wis.; Sanford, Fla.  
**Field, B. B., & Co.** (Washers and packings), 10 Clarence St., Worcester, Mass.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Field & Shorb Co.**, The (Clatern pumps), 133 W. William St., Decatur, Ill.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Filer & Stowell Co.**, The (Engines and mach'y), 219 Beecher St., Milwaukee, Wis.  
**Files Engineering Co., Inc.**, The (Stokers), Providence, R. I.  
**Finlayson Tool Co.**, The (Well drilling mach'y), Tulsa, Okla.  
**Finn, John, Metal Works** (Bearing metal), 384 2d St., San Francisco, Cal.; 470 Colman Bldg., Seattle, Wash.  
**Fire Gun Mfg. Co., Inc.** (Fire extinguishers), 115-119 Fourth Ave., New York, N. Y.; 538 S. Clark St., Chicago, Ill.  
**Fire Protection Equipment Co.** (Fire extinguishers), 538 S. Clarke St., Chicago.  
**Firex Mfg. Co.** (Fire extinguishers), 2039 S. Morgan St., Chicago, Ill.  
**First Aid Equipment Co.** (First aid kits), 10 E. 23d St., New York.  
**Fischer & Hayes Rope & Steel Co.** (Wire and manila rope), 741-745 W. Van Buren St., Chicago, Ill.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Fischer Machine Works** (Mach'y), 1841 Carroll Ave., Chicago, Ill.  
**Fischer Machine Works** (Grooving machines), 310-316 11th St., Philadelphia, Pa.  
**Fischer Special Mfg. Co.** (Machine screw products), Cincinnati, Ohio.  
**Fisher Governor Co.**, The (Governors, valves, etc.), Marshalltown, Ia., 117 No. Dearborn St., Chicago, Ill.  
**Fisher Leather Belting Co., Inc.**, The (Leather belting), 221 N. 3d St., Philadelphia, Pa.; Charleston, W. Va.; El Paso, Tex.; 523 First Ave., Pittsburgh.  
**Fisher, Martin, & Sons** (Ventilators), 438-440 Pearl St., Buffalo, N. Y.  
**Fisher & Norris** (Anvils and vises), 37 Fair St., Trenton, N. J.  
**Fiske Brothers Refining Co.** (Oils and greases), 24 State St., New York; Pittsburgh; Newark, N. J.; Providence, Boston, Chicago, Cleveland, New Haven, Philadelphia, San Francisco, Toledo.  
**Fitchburg Machine Works** (Lathes), Fitchburg, Mass.  
**Fitchburg Steam Engine Co.** (Steam engines), Fitchburg, Mass.; Fisher Bldg., Chicago; 39 Cortland St., New York; 924 Samson St., Philadelphia.  
**Fittler, The Edwin H., Co.** (Rope), 517 Arch St., Philadelphia, Pa.  
**Fitta, Frank H., Mfg. & Supply Co.** (Oil filters, cans, etc.), 88 Purchase St., Boston, Mass.

- Fitz Water Wheel Co. (Water wheels), Hanover, Pa.; Bourse Bldg., Philadelphia.
- Fitzgerald Mfg. Co., The (Gaskets), Torrington, Conn.
- Fitzgibbons Boiler Co. (Boilers), E. 10th & Dewitt Sts., Oswego, N. Y.; 8 W. 40th St., New York.
- Fitzsimmons Co., The (Shaftings), Youngstown, O.
- Flagg, Stanley G., & Co. (Pipe fittings), 1421 Chestnut St., Philadelphia, Pa.
- Flanner Water Tube Boiler Co. (Boilers), 518 2nd Nat'l Bank Bldg., Akron, O.
- Flannery Bolt Co., The (Staybolts), Vanadium Bldg., Pittsburgh, Pa.; works, Bridgeville, Pa.
- Flannery, P. J., Co. (Steam, water and gas brass goods), 33 Whiting St., New Britain, Conn.
- Flash Chemical Co. (Hand soap), 160 2d St., Cambridge, Mass.; Chicago; New York; Pittsburgh, Pa.
- Flash Sales Corp'n, The (Combination wrench), 5821 Ravenswood Ave., Chicago.
- Flather Mfg. Co., The (Machine tools), Nashua, N. H.
- Flather Co., Inc. (Machine tools), Nashua, N. H.
- Fleck Bros. Co. (plumbing and heating supplies), 40-50 N. 5th St., Philadelphia; 2nd & Federal Sts., Camden, N. J.; Baltimore Ave., Lansdowne, Pa.
- Fletcher-Terry Co., The (Glass cutters), Forestville, Conn.
- Flexible Metal Co. (Floor and ceiling plates), 176 Main St., Bristol, Conn.
- ◆ Flexible Steel Lacing Co. (Belt lacing), 4607-31 Lexington St., Chicago, Ill.
- "Flexitallie" Gasket Co. (Gaskets), 924 No. 8th St., Camden, N. J.
- Flierl, Christian Co., Inc. (Pulley bushings), 1352 Genesee St., Buffalo, N. Y.
- Flinn & Drexler Co. (Fuel gas boilers), 431 S. Dearborn St., Chicago, Ill.
- Flinn, Richard J. (Steam traps), West Roxbury Sta., Boston, Mass.
- Flint, Warren F., Co. (Flue brushes), 78 India St., Boston, Mass.
- Flint & Walling Mfg. Co. (Pumps), Kendallville, Ind.
- Flintkote Co. (Roofing), 88 Pearl St., Boston, Mass.; New Orleans, New York, Chicago.
- Florentine Pottery Co., The (Lavatories, etc.), Chillicothe, O.
- Flory, S. Mfg. Co. (Hoisting engines), Main and Market Sts., Bangor, Pa.; 95 Liberty St., New York; Monadnock Block, Chicago; First Nat'l Bank Bldg., Pittsburgh.
- Flower, Frank H. (Plumbers' price books), 1216 Peach St., Erie, Pa.
- Flower Valve Mfg. Co. (Valves), 3631 Parkinson St., Detroit, Mich.
- Flower, Walter L. Steam Specialty Co. (Steam specialties), 317 S. 8th St., St. Louis, Mo.
- Flushvalve Co. (W. C. valves), 1004-06 River Road, Edgewater, N. J.
- Flynn & Emrich Co. (Hand stokers), Baltimore, Md.
- Foamite Firefoam Co. (Fire extinguishers), 200 5th Ave., New York.
- (See Index to advertisements, pages 7, 8 and 9.)
- Focht, Geo., Sons (Wheelbarrows, coal and ore buckets), 119 Adams St., Hoboken, N. J.
- Folding Scaffold Bracket Co. (Scaffold brackets), 60 W. Lafayette St., Detroit, Mich.
- Follansbee Brothers Co. (Metal sheets), Pittsburgh, Pa.
- Folsom, R. L. (Heating boilers), 235 Congress St., Boston, Mass.
- Foltz Smokeless Furnace Co. (Smokeless furnaces), 175 W. Jackson Blvd., Chicago.
- Foos Gas Engine Co., The (Gas engines), Springfield, O.; 10724 Superior St., Cleveland; 53 W. Jackson Blvd., Chicago.
- Foot Bros. Gear & Machine Co. (Gears), 213 N. Curtis St., Chicago, Ill.
- Foot-Burt Company, The (Drilling machines, etc.), 13000 St. Clair Ave., N. E., Cleveland, O.
- Foot Concrete Machinery Co. (Concrete mixers), 1241 S. Mich. Ave., Chicago, Ill.
- Foot Co., Inc., The (Concrete mixers), Nunda, N. Y.
- Foran Foundry & Mfg. Co. (Castings), Flemington, N. J.; New York; Brooklyn.
- Forbes, Benjamin P., Co., The (Skylight cleaner), 409 Superior Ave., 565 W. Washington St., Chicago, Ill.
- Forbes Co. (Water sterilizers), 1234 Callowhill St., Philadelphia, Pa.
- Forbes, John R., Foundry & Iron Works (Grate-bars), 1753 Merseles St., Jersey City, N. J.
- Forbes & Myers (Electric grinders), 172 Union St., Worcester, Mass.
- ◆ Ford Chain Block & Mfg. Co. (Chain blocks), N. E. Cor. 2nd and Diamond Sts., Philadelphia, Pa.
- Ford Meter Box Co. (Meter boxes), Wabash, Ind.
- Ford, J. E., Co., The (Metal cleaner), Wyandotte, Mich.
- Ford Regulator Corp (Regulators and valves), 407 Broome St., New York; 1830 Lytton Bldg., Chicago.
- Ford Roofing Products Co. (Roofing, etc.), Chicago, Ill.; St. Louis, Kansas City, Buffalo, Louisville, Atlanta; Vandalia, Ill.; Clinton, Ia.; York, Pa.
- Ford & Kendig Co. (Pipe fittings, hangers, etc.), 1428-30-32 Callowhill St., Philadelphia, Pa.
- Ford's Porcelain Works (Porcelain sinks, urinals, etc.), Perth Amboy, N. J.; 103 Park Ave., New York.
- Forest City Bit & Tool Co. (Tools), Rockford, Ill.
- Forg, Peter, Mfg. Co. (Valve wheels), 50 Park St., Somerville, Mass.
- Forsdick Machine Tool Co., The (Mach. tools), Blue Rock, Apple, Palm & Turrill Sts., Cincinnati, O.
- Forster, John M., Co. (Wood pulleys, leather belting), 110 Mill St., Rochester, N. Y.
- Fort Wayne Engineering & Mfg. Co. (Pumps, compressors, etc.), Fort Wayne, Ind.
- Fort Wayne Rolling Mill Works (Bolts, etc.), Fort Wayne, Ind.
- Fortney Mfg. Co. (Thread measuring wires), 120 Malone Ave., Belleville, N. J.
- Foskett & Bishop Co., The (Steam traps), Blatchley Ave. and River St., New Haven, Conn.
- Foss, W. J., Company (Fire extinguishers), Springfield, Mass.
- Foss & Bump (Leather belting), Springfield, Mass.
- Fosston-Carpenter Co. (Oil pumps), Merriam Park, St. Paul, Minn.
- Foster Bolt & Nut Mfg. Co. (Bolts, screws), E. 73d St. and W. & L. E. Ry., Cleveland, O.
- Foster, C. H. (Range boiler stands), 10 Princeton Ave., St. Louis, Mo.
- Foster Machine Co. (Lathes), 1100 W. Beardsley Ave., Elkhart, Ind.; 50 Church St., New York, N. Y.
- Foster, Merriam & Co. (Bath room fittings), Meriden, Conn.; 225 Canal St., New York, N. Y.
- Foster Pump Works (Pumps), 36 Bridge St., Brooklyn, N. Y.
- Foster Sheet Metal Co. (Radiator shields), 10th and Carpenter Sts., Springfield, Ill.
- Foster, Walter H., Co., The (Milling machines), 50 Church St., New York.
- Fostoria Screw Co., The (Screw machine products), Fostoria, Ohio.
- Foulds, I., & Son (Leather belting), Hudson, Mass.
- Foundry Appliance Co. (Foundry devices), Newark, N. J.
- Foundry Equipment Co. (Core ovens), 1831 Columbus Rd., Cleveland, O.
- Fountain Faucet Co. (Plumbers' brass goods), 21-23 S. 61st Ave., W., Duluth, Minn.
- Fouts, C. C., Co., The (Steel shelving), Middletown, O.
- Fowden, Wm. T. (Blow-off valves), 3d and Concord Sts., Chester, Pa.
- Fowle, John L. (Saws and knives), Woburn, Mass.
- Fowler & Wolfe Mfg. Co. (Wall radiators), Bulletin Bldg., Philadelphia, Pa.
- Fox Bros. & Co. (Packing), 126-130 Lafayette St., New York, N. Y.
- Fox Chase Engineering Co., Inc. (Machinery), 427 Walnut St., Philadelphia, Pa.
- Fox, John, & Co. (Cast iron pipe hydrants, etc.), 258 Broadway, New York, N. Y.
- Fox Machine Co., Inc. (Metal working machines), Jackson, Mich.
- Fox Supply Co. (Floor surfacers), Brooklyn, Wis.
- Foxboro Co., Inc. (Gages, meters, etc.), Foxboro, Mass.; Chicago, New Philadelphia, Birmingham, Tulsa, Okla.; Montreal.
- France Gas Consumer Co., The (Smoke consumers), Matteawan, N. Y.
- France Packing Co., Inc. (Packing), 6514 State St., Tacony, Philadelphia, Pa.; 30 Church St., New York; 143 Commerce St., Newark, N. J.; 1707 Glenarm St., Denver, Colo.; Hooper & Eldredge Bldg., Salt Lake City, Cleveland; San Francisco.
- Francis, Chas E., Co. (Factory trucks, glue mach'y), Rushville, Ind.
- Francis & Co. (Diamond tools), Hartford, Conn.
- Frank Bros. (Plumbing specialties), 207 E. Fifth St., New York.
- Frank & DeKeyser (Bath room fittings), 33 Park Pl., New York, N. Y.
- Frank, Henry, Jr. (Tool grinders), 372-374 Hudson St., New York, N. Y.
- Franklin Brass Foundry (Ferrules and brass nipples), Young St. and Starr Ave., Long Island City, N. Y.
- Franklin Co., The (Gas-steam radiators), Canton, O.
- Franklin Cotton Mill Co., The (Cotton belting), Plum and Charles Sts., Cincinnati, O.
- Franklin Electric Mfg. Co. (Lamps), Hartford, Conn.
- Franklin Gas Burner Mfg. Co. (Fuel gas burners), Cincinnati, O.
- Franklin Machine Co. (Power trans. mach'y), 189 Charles St., Providence, R. I.
- Franklin Mfg. Co. (Logging tools), 545 R. R. Way, Seattle, Wash.
- Franklin Mfg. Co., The (Asbestos covering, gaskets, etc.), Franklin, Pa.; 153 Milk St., Boston; 20 E. Jackson Blvd., Chicago; 501 Fifth Ave., New York.
- Franklin Mfg. Co., The (Wire forming mach'y and bolt clippers), New Haven, Conn.
- Franklin Oil & Gas Co. (Oils, carburetors), Bedford, O.; Chicago, Dayton, O., Jersey City, Springfield, Mass., Toledo.
- Franklin Portable Crane & Hoist Co. (Portable cranes), Franklin, Pa.

- Franklin Valveless Engine Co. (Engines), Franklin, Pa.; Tulsa, Okla.; Fort Worth, Texas.
- Franz-Holbrook Bronze Co. (Bearing metals), Newark, N. J.
- Fraser, Warren F. Co., The (Grinding machines), Westboro, Mass.; 201 Devonshire St., Boston.
- Frasse, Peter A., & Co., Inc. (Folding steel horses), 417 Canal St., New York, N. Y.; Buffalo, N. Y.; Philadelphia.
- Fray, John S., Co., The (Breast drills), Bridgeport, Conn.
- Frazer Point Co. (Structural paint), 2475 Hubbard Ave., Detroit, Mich.
- Freadrich Belting Co. (Leather belting), St. Louis, Mo.
- Frederick Iron & Steel Co. (Centrifugal pumps), Frederick, Md.
- Frees, Francis L., Glass Works, Inc. (Thermometers and hydrometers), Conshohocken, Pa.
- Freed Heater Co. (Heating boilers), Collegeville, Pa.; Philadelphia, Pa.; New York, N. Y.
- Freeman Mfg. Co., The (Boilers and heaters), Racine, Wis.; Chicago, 2427 Cass, Detroit.
- Freeport Truck & Clamp Co. (Factory trucks, etc.), Freeport, Mich.
- French Mfg. Co. (Brass and copper tubing), Waterbury, Conn.
- Fretz, S. S., Jr., & Co. (Pipe nipples), 23d St. and Sedgley Ave., Philadelphia, Pa.
- Frick Co. (Engines, boilers, mach'y), Waynesboro, Pa.; Rochester, Philadelphia, Baltimore, Pittsburgh, Atlanta, Ga.
- ❖ Frictionless Metal Co. (Bearing metal), Chattanooga, Tenn.; Richmond; Montreal.
- Fries & Co. (Plumbers' brass goods), 89-91 Main St., Buffalo, N. Y.  
(See Index to advertisements, pages 7, 8 and 9.)
- Frigidaire Corporation (Refrigerators), Dayton, O.
- Frisbie Motor Co. (Gas engines), Middletown, Conn.
- Frits, Geo. J., Foundry & Machine Co. (Mach'y, pumps, steam engines, etc.), 2008-28 S. Third St., St. Louis, Mo.
- Fromm, G. A. (Radiation calculators), 387 Ocean Ave., Brooklyn, N. Y.
- Frontier Chuck & Tool Co. (Chucks), 36 Letchworth St., Buffalo, N. Y.
- Frontier Iron Works (Drill presses and hack saws), Letchworth and Grant Sts., Buffalo, N. Y.
- Frontier Mfg. Co. (Belt dressing), North Tonawanda, N. Y.
- Frontier Meter Works (Meters), 12 Waverly St., Buffalo, N. Y.
- Frost Engine Co. (Gas engines), Evansville, Wis.
- Frost Mfg. Co. (Plumbers' brass goods), Kenosha, Wis.  
(See index to advertisement, pages 7, 8 and 9.)
- Frost Mfg. Co., The (Boilers), Galesburg, Ill.; 113 Adams St., Chicago, Ill.
- Frost, N. E., Co. (Heat generators), 28 E. Jackson Blvd., Chicago, Ill.
- Frost Paint & Oil Co. (Paints), 1209-11 Tyler St., N. E., Minneapolis, Minn.
- Fry, B. L., Mfg. Co. (Tool grinders), St. Louis, Mo.
- Fulfo Pump Co. (Lubricating pumps), Blanchester, O.
- Fuller Brothers Co. (Wrenches, pipe), 139 Greenwich St., New York, N. Y.
- Fuller, H. B., Co. (Steel scaffolding, etc.), 186-190 W. 3rd St., St. Paul, Minn.
- Fuller Iron Works, The (Castings), Providence, R. I.
- Fuller & Johnson Mfg. Co. (Pumps and engines), Madison, Wis.; 35 Western Ave., Minneapolis, Minn.; 1102-4 Farnam St., Omaha.
- Fuller, Otis L. (Slitting shears), Goshen, Ind.
- Fuller-Lehigh Co. (Crushing machinery), Fullerton, Pa.
- Fuller-Warren Co., The (Stoves), 32d and Wright Sts., Milwaukee, Wis.
- Fuller & Warren Co. (Warm air furnaces, gas ranges, etc.), 256 Water St., New York, N. Y.
- Fulper Pottery Co. (Water filters), Flemington, N. J.
- Fulton Co., The (Heating specialties), Knoxville, Tenn.; 30 Church St., New York; Wrigley Bldg., Chicago; 1247 Wash. Blvd., Detroit.
- Fulton Iron Works (Steam engines), 1259 Delaware St., St. Louis, Mo.
- Fulton Iron Works (Tackle blocks), 3508 St. Aubin St., Detroit, Mich.
- Fulton Machine Tool Co. (Lathes), 1422 W. Randolph St., Chicago, Ill.
- Fulton Machine & Vise Co. (Vises), Lowville, N. Y.
- Furlong, Thos. N. (Cement laundry trays), 360-364 Fell St., San Francisco, Cal.
- Furnace Regulator Co. (Damper regulators), Barnesville, Ohio.
- Furness Bros. Co. (Steam pumps), 1613 W. Walnut St., Chicago, Ill.
- Futrell Coupler Co. (Grates, shaking and dumping), Streator, Ill.
- Fyr-Fyter Co., The (Fire extinguisher), Dayton, O.; 911 Rand-McNally Bldg., Chicago; 200 Fifth Ave., New York.
- Fyro Extinguisher Co. (Fire extinguishers), Syracuse, N. Y.
- G-A Ball Bearing Mfg. Co. (Ball bearings), 3051 W. Lake St., Chicago, Ill.
- Gade Bros. Mfg. Co. (Gas engines), Iowa Falls, Ia.
- Gadsden Pipe Co. (Cast iron pipe), Gadsden, Ala.
- Gaffga, J. S., Sons (Gas engines), Greenport, N. Y.
- Gage Co., The (Boiler protectors), Dayton, O.
- Gage, E. E., Mfg. Co. (Band saws), Gardner, Mass.
- Gainesville Foundry & Machine Works (Grates and castings), Gainesville, Fla.
- Galtes, Peace & Co. (Lighting fixtures), 661-665 Manhattan Ave., Brooklyn, N. Y.
- Galard Co., The (W. C. seats, tanks, etc.), 327-341 Sixth Ave., Newark, N. J.; 417 Mechanics' Savings Bank Bldg., San Francisco; 504 Audubon Bldg., New Orleans.
- Gale-Sawyer Co., The (Small tools), Boston, Mass.; 289 E. Jefferson Ave., Detroit.
- Galena Signal Oil Co. (Oils), Franklin, Pa.; Chicago; Cincinnati; New York; Richmond; Atlanta; San Francisco; Indianapolis.
- Galewski, A., & Son (Tool bags), 453-55 Broome St., New York, N. Y.
- Gallon Dynamic Motor Truck Co. (Factory motor trucks), Gallon, Ohio.
- Gallon Iron Works & Mfg. Co. (Mach'y and pipe), Gallon, O.; Pittsburgh, Pa.; Harrisburg, Pa.; Enid, Okla.; Lincoln, Neb.; Memphis, Columbia, S. C.; Kansas City, Minneapolis, Roanoke.
- Galland-Henning Mfg. Co. (Hydraulic mach'y), Railway Exchange Bldg., Milwaukee, Wis.
- Galloway, Wm., Co., The (Gas engines), Waterloo, Ia.
- Galva Heater Co. (Heating boilers), Galva, Ill.
- Galvanized Products Co., East Stroudsburg, Pa.
- Galvanizing Corp. of America, Inc. (Metal cleaners), 244 Eagle St., Brooklyn, N. Y.
- Gammons-Holman Co. (Reamers), Manchester, Conn.
- Gamon Meter Co. (Water meters), 278 South St., Newark, N. J.
- Gandy Belting Co., The (Cotton belting), 726-740 W. Pratt St., Baltimore, Md.; 36 Warren St., New York; 549 W. Washington St., Chicago.
- Ganschow, Wm., Co. (Gears), Washington Blvd. & Morgan St., Chicago, Ill.
- Garden City Fan Co., 332 S. Michigan Ave., Chicago, Ill.
- Garden City Laboratory (Soldering flux), 2455 Archer Ave., Chicago, Ill.
- Garden City Plating & Mfg. Co. (Bath room fittings & mirrors), 1430 S. Talman Ave., Chicago, Ill.
- Gardner Metal Co., The (Solder, bearing metal and lead products), 1364 W. Lake St., Chicago, Ill.
- Gardner Brass Works (Plumbers' ferrules), Main office, Gardner, Mass.; Sales Department, Boston.
- Gardner Governor Co., The (Pumps, governors, etc.), Quincy, Ill.; New York, Philadelphia, Chicago, Los Angeles, San Francisco.
- Gardner Grate Co. (Glass gauge shields), 21 Burgess St., Boston, Mass.
- Gardner Machine Co. (Grinders), Beloit, Wis.
- Garfield Machine Works (Screw machine products), Garfield, N. J.
- Garland Co., The (Flooring), 5716 Euclid Ave., Cleveland, O.
- ❖ Garland Mfg. Co. (Bolts and nuts), Bailey-Farrell Bldg., West Pittsburgh, Pa.; Chicago; New York; Cleveland.
- Garlock Packing Co. (Packings), Palmyra, N. Y.; Philadelphia; San Francisco; New Orleans; New York; Pittsburgh; Cleveland; Chicago; Boston; St. Louis; Denver; Ellwood City, Pa.; Birmingham, Ala.
- Garner Ventilating Co. (Ventilators), 705 Fulton Ave., Chicago, Ill.
- Garnet Co., The (Belt dressing and oils), Allentown, Pa.
- Garnett, Herbert (Respirators), 453 N. Prospect Ave., Grand Rapids, Mich.
- Garnet, Geo. H., Co. (Disinfectants), Allentown, Pa.
- Garratt, W. T., & Co. (Steam brass goods), 277-279 Fremont St., San Francisco, Cal.
- Garratt-Callahan Co. (Boiler compound), 27 S. Clinton St., Chicago, Ill.
- Garrison, A., Foundry Co. (Machinery), Pittsburgh, Pa.
- Garrison Brass & Machine Works (Plumbing specialties), 107 W. 13th St., New York, N. Y.
- Garrison Co., The (Grease cups), 348 George St., Bridgeport, Conn.
- Garrison Machine Works (Gear chucks), Dayton, O.
- Garrett, C. S., & Son Co. (Papers), 20-22 S. Marshall St., Philadelphia, Pa.
- Garrett, Samuel H. (Baling presses), 5810 Whitby Ave., Philadelphia, Pa.
- Garrett, W. D., & Co. (Valves and steam specialties), 118 East 28th St., New York.
- Garvin Machine Co., The (Tool grinders), Spring and Varick Sts., New York, N. Y.
- Garwood Bronze & Iron Works (Bench legs), Garwood, N. J.
- Gary Screw & Bolt Co. (Wood screws), 123 S. Michigan Ave., Chicago, Ill.

- Gas Appliance Co. (Blowers, pressure), Newton, Mass.  
 Gas Appliance Co., The (Gas furnaces), 414 Perry Payne Bldg., Cleveland, Ohio.  
 Gas Engine & Power Co. and Chas. L. Seabury & Co., Consolidated (Gas engines, boilers), Morris Hgts., New York, N. Y.  
 Gas Machinery Co., The (Gas plant mach'y), 1900 Euclid Ave., Cleveland, O.; 69 Broad St., Boston, Mass.  
 Gaskell, Wm., & Son (Bolts), 55-61 Freeman St., Brooklyn, N. Y.  
 Gasket Supply Co., The (Gaskets and washers), 1729 Ludlow St., Philadelphia, Pa.  
 Gaston Scale Co. (Scales), Beloit, Wis.; 1054 Plymouth Bldg., Minneapolis, Minn.  
 Gaylord Sanitary Mfg. Co. (Water closet combinations, washers, nozzles), El Dorado, Kans.  
 Gealy, G. M. (Wrenches), Grove City, Pa.  
 Geddes, Joseph (Ventilators), 10 Allen St., Rochester, N. Y.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Geler, P. A., Co., The (Vacuum cleaners, shaft straighteners), 5112 St. Clair Ave., Cleveland, O.  
 Gelst Manufacturing Co. (Preheaters, welding), 2001 Atlantic Ave., Atlantic City, N. J.  
 Gem Brass Mfg. Co. (Plumbers' brass goods), 2104-2106 Woodland Ave., Cleveland, Ohio.  
 Gem City Boiler Works (Boilers), Cor. Leo & Dallas Sts., Dayton, O.  
 ♦ Gem Mfg. Co. (Oilers, torches, flexible shafting, etc.), 1220 Goebel St., Pittsburgh, Pa.; New York, Philadelphia, Pa.  
 ♦ General Abrasive Co. (Abrasives), Niagara Falls, N. Y.  
 ♦ General Asbestos & Rubber Co. (Packing and asbestos paper), Charleston, S. C.; 58 Warren St., New York; 312 Water St., Philadelphia; 14 N. Franklin St., Chicago.  
 General Boilers Company (Heating boilers and tanks), Waukegan, Ill.  
 General Combustion Co., The (Oil furnaces), Monadnock Bldg., Chicago, Ill.; Dime Bank Bldg., Detroit, Mich.; Equitable Bldg., New York, N. Y.  
 General Compressed Air & Vacuum Machinery Co. (Compressors), Pontiac Bldg., St. Louis, Mo.  
 General Concrete Construction Co. (Concrete smoke stacks), 1309 Manhattan Bldg., Chicago, Ill.; 30 Church St., New York.  
 General Electric Co. (Electrical mach'y and supplies), Schenectady, N. Y.  
 General Fire Extinguisher Co. (Valves, fittings, etc.), 1 Liberty St., New York, N. Y.; 275 West Exchange St., Providence, R. I.; Post Office Square Bldg., Boston; Dun Bldg., Buffalo; Mutual Life Bldg., Philadelphia; 208 S. LaSalle St., Chicago; Union Trust Bldg., Cincinnati; Society for Savings Bldg., Cleveland; Lincoln Trust Bldg., St. Louis; Charlotte, N. C.; Atlanta, Ga.; New Orleans; 175 McCord St., Montreal.  
 General Gas Light Co. (Gas lamps and mantles), Kalamazoo, Mich.; 46 W. Broadway, New York; 768 Mission St., San Francisco.  
 General Gas-Electric Co. (Domestic electric plants), Hanover, Pa.  
 General Grinding Wheel Corp., Clementine, Thompson and Mercer Sts., Philadelphia.  
 General Mfg. Co. (Gas water heaters), 67 19th St., Wheeling, W. Va.  
 General Mfg. Co. (Fire extinguishers), 18th and Pine Sts., St. Louis, Mo.  
 General Mfg. Co. (Sewer cleaning compound), 217 Seneca St., Oil City, Pa.  
 General Metals Co. (Thread milling machines), 6189 Greenwood Ave., Detroit, Mich.  
 General Ordnance Co. (Gasoline tractors), Cedar Rapids, Iowa.  
 General Pipe & Foundry Co. (Pipe and fittings), 400-420 Highland Ave., Atlanta, Ga.  
 General Scientific Instrument Co. (Thermometers, etc.), N. Philadelphia, Pa.  
 General Specialty Co. (Flue cleaners), 64 Carroll St., Buffalo, N. Y.  
 General Supply & Machine Co. (Sawmill mach'y), Meridian, Miss.  
 General Vehicle Co. (Portable cranes), Long Island City, N. Y.  
 General Wire Co. (Wire cloth), Worcester, Mass.  
 Genesee Mfg. Co., The (Milling tools), Rochester, N. Y.  
 Genesee Metal Co. (Bearing metal), Rochester, N. Y.  
 Geneva Boiler Works, Geneva, N. Y.  
 Geneva Foundry Corporation (Heating boilers), 23 Jackson St., Geneva, N. Y.  
 ♦ Geometric Tool Co. (Die and top holders), New Haven, Conn.; 627 W. Washington Blvd., Chicago, Ill.  
 Georgia Iron Works (Sawmill mach'y), Augusta, Ga.  
 Georgia Talc Co. (Talc products), Asheville, N. C.  
 Gerard Mfg. Co., (Boller fittings), Dickson City, Pa.  
 Gerard Mfg. Co. (Couplings), Dickson City, Pa.  
 Gerhardt, C. (Flue brushes), 591 Hudson St., New York, N. Y.  
 German Bronze Co. (Die castings), 345 W. 19th St., Erie, Pa.  
 Germain Bros., Co. (Plumbers' wood work), Saginaw, Mich.  
 Germanow-Simon Machine Works (Vises), 58 Mill St., Rochester, N. Y.  
 Gerson-Stewart Corp. (Sanitary materials), 1255 W. 4th St., Cleveland, O.  
 Gerstein Bros. & Cooper (Tanks and boilers), 3 W. 3d St., South Boston, Mass.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Gerstner, H., & Sons (Mechanics' tool cases), 818 Germantown St., Dayton, O.  
 Geuffer Paeschke & Frey Co. (Sheet metal goods), St. Paul Ave. and 17th St., Milwaukee, Wis.; 352-358 West Ohio St., Chicago; 712 Dime Bank Bldg., Detroit; 529 Odd Fellows Bldg., St. Louis.  
 Giant Cable Hoist Co. (Cable hoists), 1833 E. 55th St., Cleveland, O.  
 Giant Mfg. Co. (Pipe pushers), Council Bluffs, Ia.  
 Gibb Instrument Co. (Pyrometers), 1916 E. Palmer St., Detroit, Mich.  
 Gibby Foundry Co. (Boilers), East Boston, Mass.  
 Giberson, E. D., & Co., Inc. (Boiler tubes, etc.), 111 Broadway, New York.  
 Giblin & Co. (Heaters and warm air furnaces), 701 Broad St., Utica, N. Y.  
 Gibson Bros. Mfg. Co. (Cocks and bibbs), North Chicago, Ill.; New York, N. Y.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Gibson, Wm. D., Co. (Springs), 1806 Clybourn Ave., Chicago, Ill.  
 Gibson & Price Co. (Lead pipe and sheet lead), 623 St. Clair Ave., N.E., Cleveland, O.  
 Gibson-Schlemmer Co., The (Cellar drainers, etc.), 1050 Hulbert Ave., Cincinnati, O.  
 Giddings & Lewis Machine Tool Co. (Woodworking mach'y), 142 Doty St., Fond du Lac, Wis.  
 Gifford-Wood Co. (Ice mach'y and tools), Hudson, N. Y.; 565 Washington Blvd., Chicago; 50 Church St., New York; 24 Milk St., Boston, Mass.; Electric Bldg., Buffalo, N. Y.  
 Gilbert, A., & Sons Brass Foundry Co. (Brass and copper castings), 4019 Forest Park Blvd., St. Louis, Mo.  
 Gilbert, A. C., Co., The (Electric fans), New Haven, Conn.  
 Gilbert & Barker Mfg. Co. (Mach'y, pumps, heaters, etc.), 1 Union St., Springfield, Mass.; New York, San Francisco; Chicago; St. Louis.  
 Gilbert & Co. (Gauge glass gaskets), Hyattsville, Md.  
 Gilbert, Wm. L., Clock Co., The (Engine room clocks), Winsted, Conn.  
 Gilchrist, Geo. E., Co. (Shower baths), 106 High St., Boston, Mass.  
 Gill Mfg. Co., The (Mining tools), Phillipsburg, Pa.  
 Gillespie, T. A., Co., The, 755 Park Ave., New York, N. Y.; Westinghouse Bldg., Pittsburgh, Pa.  
 Gillette Roller Bearing Co., The (Factory trucks), Grand Rapids, Mich.  
 Gillette Rubber Co. (Rubber goods), 1834 Broadway, New York, N. Y.; Chicago, Philadelphia.  
 Gillis & Geoghegan (Ash conveyors), 537 W. Broadway, New York, N. Y.  
 Gilman & Son (Grinding machines), Springfield, Vt.  
 Gilmer, L. H., Co. (Auto fan belting), Tarrytown, Philadelphia, Pa.; 4829 Woodward Ave., Detroit; 540 W. Lake St., Chicago; 329 E. Water St., Milwaukee; 136 Liberty St., New York.  
 Gilmore Tube Scraper Works (Tube cleaners), 61 Terrace, Buffalo, N. Y.  
 Gilmour, J. Morrison (Draw-over tools), 8 W. 40th St., New York, N. Y.  
 Gilson Mfg. Co. (Gas engines), Port Washington, Wis.; Guelph, Ont.  
 Gilson Slide Rule Co. (Slide rules), Niles, Mich.  
 Gingras, Edward F. (Belt dressing), 202 Main St., Buffalo, N. Y.  
 Girtanner Engineering Corp. (Ash conveyors), 1400 Broadway, New York.  
 Gisholt Machine Co. (Mach'y), Madison, Wis.; 30 Church St., New York, N. Y.; 1888 Page Ave., Cleveland.  
 Gits Bros. Mfg. Co. (Oil cups), 1940 S. Kilbourne Ave., Chicago, Ill.  
 ♦ Glacier Metal Co. (Bearing metal), Richmond, Va.; 50 Church St., New York.  
 Gladium Co., Inc., The (Saws, drills, etc.), 34 Cliff St., New York, N. Y.  
 Glamorgan Pipe & Foundry Co. (Iron pipe), Lynchburg, Va.; 543 The Rookery, Chicago, Ill.  
 Glascock Stove & Mfg. Co. (Trucks and mach'y), Greensboro, N. C.  
 Glasgow Iron Co. (Boiler plates), Pottstown, Pa.; Sales Agent, Harrington, Robinson & Co., 178 High St., Boston, Mass.  
 Glauber Brass Mfg. Co. (Plumbers' brass goods), 49-51 Superior St., Cleveland, O.; 101 Park Ave., New York; 567 Mission St., San Francisco; 175 W. Jackson Blvd., Chicago; 1044-5 Syndicate Trust Bldg., St. Louis.  
 Gleason, J. L., & Co. (Electric drills), 241 Franklin St., Boston, Mass.; Montreal.  
 Gleason Works, The (Gear machines), Rochester, N. Y.  
 Glenn Mfg. Co. (Iron plumbing goods), St. Charles, Ill.  
 Glenn & Stiteler (Power pumps), 421 N. 19th St., Philadelphia, Pa.  
 Glide Road Machine Co. (Road mach'y), 557 Huron St., Minneapolis, Minn.  
 Glidden Co. (Asbestos cement), Cleveland, O.



- Globe Automatic Sprinkler Co. (Sprinklers), 2019-35 Washington Ave., Philadelphia, Pa.
- Globe Boiler Compound Co. (Boiler compounds), Birmingham, N. Y.
- Globe Brass Mfg. Co. (Brass plumbing goods), 5532 Perkins Ct., Cleveland, O.
- Globe Gas Light Co. (Soldering tools), 25-27 Union St., Boston, Mass.
- Globe Iron Roofing & Corrugating Co. (Sheet metal products), Cincinnati, O.; works at Newport, Ky.
- Globe Machine & Stamping Co., The (Tumbling barrels, etc.), 1250 W. 76th St., Cleveland, O.
- Globe Machinery & Supply Co. (Road mach'y), 207 W. Court St., Des Moines, Ia.
- Globe Mfg. Co. (Air compressors), 4500 N. Lawndale Ave., Chicago.
- Globe Seamless Steel Tubes Co., The (Steel tubing), Milwaukee, Wis.; 1043 Peoples Gas Bldg., Chicago; 30 Church St., New York.
- Globe Steel Co., The (Shot), Mansfield, O.
- Globe Ventilator Co. (Ventilators), 205 River St., Troy, N. Y.
- Globe Vise & Truck Co. (Factory trucks), 1451 Front Ave., N. W., Grand Rapids, Mich.
- Globe Woven Belting Co. (Cotton belting), 1396 Clinton Ave., Buffalo, N. Y.
- Gloria Light Co. (Gasoline lights), 1100 Washington Blvd., Chicago, Ill.
- Glover Bros. (Steam traps), Frankford, Philadelphia.
- Glow Electric Co. (Electric drills), Cincinnati, O.
- Goade Water Filter & Purifier Mfg. Co. (Water filters and softeners), Allentown, Pa.
- Goddard Tool Co. (Milling cutters and hobs), Chicago, Ill.; Dayton, O.; Philadelphia, Pa.
- Godfrey Conveyor Co. (Coal conveyor), Elkhart, Ind.
- Godfrey, Keeler Co. (Boilers and steam engines), 70 Warren St., New York, N. Y.
- (See index to advertisement, pages 7, 8 and 9.)
- Goepel, C. F., & Co. (Felt specialties), 137 E. 13th St., New York City.
- ◆ Goetze Gasket & Packing Co., Inc. (Gaskets and packing), New Brunswick, N. J.
- Goetz Brass Co. (Plumbing brass goods), 630 N. Franklin St., Chicago, Ill. (See index to advertisement, pages 7 & 8 and 9.)
- Goetz Co. (Stokers), 30 N. LaSalle St., Chicago, Ill.
- Golco Sanitary System (Toilet paper cabinets), 618 20 Cherry St., Philadelphia, Pa.
- Gold Car Heating & Lighting Co. (Heating and lighting system), 220 36th St., Brooklyn, N. Y.
- Golden-Anderson Valve Specialty Co. (Valves), 1015 Fulton Bldg., Pittsburgh, Pa.
- Golden's Foundry & Machine Co. (Power transmission mach'y), Columbus, Ga.
- Good Mfg. Co., Inc. (Plumbing specialties), 303-305 E. 184th St., New York, N. Y.; 181 Minna St., San Francisco; 60-62 Ellis St., Niagara Falls, Ont., Can.
- Good Roads Machinery Co. (Concrete mixers), Kennett Square, Pa.
- Goodall Rubber Company, Inc. (Hose, packing, etc.), 11th and Race Sts., Philadelphia, Pa.; 38 Vesey St., New York; 112 W. Pratt St., Baltimore; 532 4th Ave., Pittsburgh, Pa.
- Goodell-Pratt Company (Machine tools), Greenfield, Mass.; 107 Lafayette St., New York, N. Y.; 38 N. Clinton St., Chicago, Ill.
- Goodell, Zina Corporation (Gauges and pipe fittings), 88 Lafayette St., Salem, Mass.
- Goodman Mfg. Co. (Mining mach'y), Halsted St. and 48th Pl., Chicago, Ill.; Pittsburgh; Cincinnati; Charleston, W. Va.; St. Louis; Denver; Birmingham; Seattle; New York.
- ◆ Goodrich, The B. F., Rubber Co. (Rubber goods), Akron, O.; New York; Boston; Chicago; Philadelphia; Buffalo; Detroit; Denver; San Francisco; Los Angeles; Atlanta; Dallas; Houston; Hoboken, N. J.; Joplin, Mo.; Kansas City; Norfolk, Va.; Seattle; Baltimore.
- Goodman Machine & Tool Co. (Speed regulators), 50 Church St., New York, N. Y.
- Goodsell Packing Co. (Packings), Lake St. and 2nd Ave., Maywood, Ill.
- Goodspeed Machine Co. (Woodworking mach'y), Winchendon, Mass.
- Goodyear Tire & Rubber Co. (Rubber goods), Akron, O.; 30 Church St., New York, N. Y.
- Gooley & Edlund (Milling machines), 581 S. Clinton St., Syracuse, N. Y.
- Gordon, A. D. (Gas and water heaters), 231 Franklin St., Buffalo, N. Y.
- Gordon Hollow Blast Grate Co. (Woodworking and sawmill mach'y), Greenville, Mich.
- Gordon, R. E. (Machinery guards), 2147-49 W. Lake St., Chicago, Ill.
- Gorham Tool Co. (Milling cutters), Globe Bldg., Detroit, Mich.
- Go-Ro Mfg. Co. (Gas water heaters), 826 Baronne St., New Orleans, La.; 211 No. Michigan Ave., Chicago.
- Gorton & Lidgerwood Co. (Heating boilers and radiator valves), 96 Liberty St., New York; 182 High St., Boston.
- Gorton, Geo. Machine Co. (Metal engraving machines), 1107 13th St., Racine, Wis.
- Goss, Frank A. (Flue brushes), Morristown, N. J.
- Goubert, A. A. (Pile drivers), 90 West St., New York
- Gould & Eberhardt (Machine tools), Chancellor Ave., Newark, N. J.
- Gould Packing Co. (Packings), 88 Cambridge St., East Cambridge, Mass.
- Goulds Mfg. Co., The (Pumps), Seneca Falls, N. Y.; 16 Murray St., New York, N. Y.; 58 Pearl St., Boston, Mass.; 12-14 S. Clinton St., Chicago, Ill.; 111 N. 3d St., Philadelphia, Pa.; 636 Henry W. Oliver Bldg., Pittsburgh, Pa.; 3d Nat'l Bank Bldg., Atlanta, Ga.; 1001 Carter Bldg., Houston, Tex.; 338 Munsey Bldg., Washington, D. C.
- Goulds Mfg. Co. of Illinois, The (Pumps), 12-14 South Clinton St., Chicago, Ill.; St. Louis, Kansas City, Detroit, Omaha, Minneapolis, Cincinnati.
- Goyne Steam Pump Co., The (Steam pumps, etc.), Ashland, Pa.
- Grabler Mfg. Co., The (Pipe hangers), 6565 Broadway, Cleveland, O.; The Grabler Co. of New York, 26 Cliff St., New York.
- Grabo, E. O. (Grindstones, lathes, etc.), 180 Centre St., New York, N. Y.
- Grady Mfg. Co. (Metal polish), 250-256 Ely Ave., Long Island City, N. Y.
- Graft Furnace Co. (Heating furnaces), 61-68 Wooster St., New York, N. Y.
- Graham, Chas., Chemical Pottery Works (Sinks), 936-1018 Metropolitan Ave., Brooklyn, N. Y.
- Graham, James, & Co. (Hammers and bushings), 293 Wooster St., New Haven, Conn.
- Graham, John H., & Co. (Hack saws), 113 Chambers St., New York, N. Y.; 268 Market St., San Francisco, Cal.
- Graham Mfg. Co. (Chucks and drills), Providence, R. I.
- ◆ Graham Nut Co. (Machine bolts), 1317 W. Carson St., Pittsburgh, Pa.
- Graham Roller Bearing Corp. (Roller bearings), Coudersport, Pa.
- Grammes, L. F., & Sons (Sheet metal goods and mach'y), Allentown, Pa.
- Grand Crossing Boiler Works (Boiler burners), 1244 E. 73d St., Chicago, Ill.
- Grand Haven Brass Foundry Co. (Water closet fittings), Grand Haven, Mich.
- Grand Rapids Belting Co. (Leather belting), 1-3 Ionia Ave., Grand Rapids, Mich.
- Grand Rapids Blow Pipe & Dust Arrester Co. (Blow piping), Grand Rapids, Mich.; 5779 Russell St., Detroit.
- Grand Rapids Gasoline Engine Co. (Gas engines), Grand Rapids, Mich.
- Grand Rapids Grinding Machine Co. (Grinding machines), 17 Ottawa Ave., N. W., Grand Rapids, Mich.
- Grand Rapids Hardware Co. (Sash pulleys), 503 11th St., N. W., Grand Rapids, Mich.
- Grand Rapids School Equipment Co. (Factory trucks), 1480 Front Ave., N. W., Grand Rapids, Mich.
- Grand Rapids Salvage Co. (Baling presses), 21 Market Ave., Grand Rapids, Mich.
- Grand Rapids Vapor Kiln (Lumber testers), Grand Rapids, Mich.
- Grant Gear Works (Gears), 151 Pearl St., Boston.
- Grant Iron Works (Steam engines, castings, etc.), Mahanoy City, Pa.
- Grant Mfg. & Machine Co., The (Riveting machines), Bridgeport, Conn.
- Graphite Metallizing Corp. (Self-lubricating bushings), Yonkers, N. Y.
- Graselli Powder Co., The (Soldering flux), The Arcade, Cleveland, O.; Philadelphia; Pittsburgh; Chicago; Uniontown, Pa.; Pottsville, Pa.
- ◆ Graton & Knight Mfg. Co. (Leather belting, etc.), Worcester, Mass.; Atlanta, Boston, Chicago, Cincinnati, Cleveland, Detroit, Fall River, Kansas City, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, Portland, Me.; Seattle, St. Louis, Dallas, Milwaukee, San Francisco.
- Graver, Wm., Tank Works (Tanks, etc.), East Chicago, Ind.; Denver; Salt Lake City; Los Angeles.
- Gray, D. W., Co., Inc. (Tool handles), 75 Barclay St., New York.
- Gray, G. A., Co., The (Planers and countershafts), Cincinnati, O.
- Gray Iron Foundry Co. (Iron plumbing specialties), West Green and Tulphocken Sts., Reading, Pa.
- Gray Machine Tool Co., Inc. (Thread millers), 2649 Main St., Buffalo.
- Gray Motor Co. (Gas engines), Mack and Detroit Terminal Railway, Detroit.
- Gray & Prior Machine Co., The (Soda and potash kettles), 120 Sumfield St., Hartford, Conn.
- Gray's Harbor Ship Building Co. (Ship builders), 910 Security Bldg., Seattle, Wash.
- Greason Mfg. Co. (Galvanized covers and drain boards), 106-110 W. 99th St., New York, N. Y.
- Great Lakes Chemical Works (Boiler compound), Appleton, Wis.
- Great Lakes Engineering Works (Steam engines and mach'y), River Rouge, Mich.
- Great Western Mfg. Co. (Mach'y), Leavenworth, Kan.; 1221 Union Ave., Kansas City, Mo.



Great Western Oil Co., The (Lubricating oil, paint, etc.), 2855 E. 37th St., Cleveland, O.; Detroit; Chicago; Buffalo; Grand Rapids; Denver; El Paso; Sault Ste. Marie; Muskegon, Mich.; Toledo, O.; Indianapolis; St. Louis.

Great Western Smelting & Refining Co. (Copper, lead, tin, etc.), 41st and Wallace, Chicago, Ill.; San Francisco; Seattle; Los Angeles; St. Louis; Vancouver; Cleveland; Cincinnati; Detroit; Philadelphia; New York; St. Paul.

Greaves, Klusman Tool Co. (Woodworking mach'y), Cook and Alfred Sts., Cincinnati, O.

Greb Co., The (Wheel pullers), 337 State St., Boston, Mass.

Green Engineering Co. (Mechanical stokers, ash disposal system), East Chicago, Ind.; Pittsburgh; St. Louis; St. Paul; El Paso, Tex.

Green Equipment Corp. (Commutator grinders, etc.), 260 Monadnock Bldg., Chicago.  
(See index to advertisement, pages 7, 8 and 9.)

Green Fuel Economizer Co., The (Heating and drying apparatus), Beacon, N. Y.; New York; Chicago; Boston; Philadelphia.

♦ Greene, Tweed & Co. (Packings, belt fittings, etc.), 109 Duane St., New York, N. Y.

Green, A. H. (Pipe and boiler coverings), 1801 Federal St., Camden, N. J.

♦ Greenfield Tap & Die Corp., Greenfield, Mass.; 15 Warren St., New York; 13 S. Clinton St., Chicago; 1143 Locomotive Engineers Bldg., Cleveland; 336 Congress St. W., Detroit; Galt, Ont., Canada.

Greenlaw Mfg. Co. (Flexible joints), 141 Milk St., Boston, Mass.

Greenlee Bros. & Co. (Woodworking mach'y), Rockford, Ill.

Greenlie-Halliday Co. (Pipe hangers), 495-499 Water St., New York.

Greenwood & O'Neill (Radiator calculators), Princeton, Ill.

Greenwood, Chester, & Co. (Boring machines), Farmington, Me.

Greenwood Mfg. Co. (Drainage ferrules), 5140 Greenwood Ave., Detroit, Mich.

Greer Chemical Co., The (Water filters), 20 W. Jackson Blvd., Chicago, Ill.; 410 E. 13th St., Kansas City; 401 Pennsylvania Bldg., Philadelphia; 874 Broadway, New York.

Gregg Co., The (Cars), 64 Wall St., New York, N. Y.

Grether Fire Equipment Co. (Fire department supplies), Dayton, O.

Griebel Instrument Co. (Hydrometers), Carbondale, Pa.

Grier Brothers Co., The (Miners' lamps), Pittsburgh, Pa.

Griffin, G. W., Co. (Saws), Franklin, N. H.

Griffin, John J., & Co. (Meters), 1513-21 Race St., Philadelphia, Pa.; 559 W. 47th St., New York.

Griffin Mfg. Co., The (Brackets, etc.), Erie, Pa.

Griffin Roofing Co. (Roofing cement), 506 W. 26th St., New York, N. Y.

Griffith Tool Works (Hammers and hatchets), 520 Commerce St., Philadelphia.

Griffiths, James A., & Sons (Injectors, etc.), 1315-17 Buttonwood St., Philadelphia, Pa.

Griffiths, The Albert, Saw Co. (Saws and knives), 30 Whittier St., Boston, Mass.

Grimes Molding Machine Co. (Molding machines), 5736 Hastings St., Detroit, Mich.

Grindle Fuel Equipment Co. (Powdered coal burners), 1901 S. Rockwell St., Chicago, Ill.

Grinnell Co., Sales Company for General Fire Extinguisher Co. (Valves, fittings, etc.), 275 West Exchange St., Providence, R. I.

Grinnell Electric Heater Co. (Electric water heaters), Grinnell, La.

Grip Nut Co. (Locknuts), 5917 S. Western Ave., Chicago, Ill.

Grip-Tite Co. (Belt dressing), New Brunswick, N. J.

Griscom-Russell Co. (Engines and steam specialties), 90 West St., New York, N. Y.; Chicago; San Francisco, Cal.; Philadelphia.

Griswold Mfg. Co., The (Oil heaters), Erie, Pa.

Groeniger Mfg. Co., The (Floor flanges) 8 E. Chestnut St., Columbus, O.

Groetken Pump Co., The (Gasoline pumps), 179-87 River St., Aurora, Ill.

Groezinger's Sons, G. (Belt lacing), Lancaster, Pa.

Gross, Geo. (Pipe brackets, cast iron basins), Rockaway Beach, L. I.

Grote Mfg. Co. (Elevators and presses), Evansville, Ind.

Grove Mfg. Co. (Callipers), 35 Colorado Ave., Dayton, O.

Grover File Co., The (File handles), 2 Canal St., Nashua, N. H.

Gruman Ice Tool Works (Ice breakers), Branchville, Conn.

Grupe Drier & Boiler Co. (Drying apparatus), 317 E. 2d St., Davenport, Ia.

Guardian Gas Appliance Co. (Garbage burners), Cleveland, O.

Guarantee Construction Co. (Conveyors), 152 Cedar St., New York, N. Y.

Guarantee Liquid Measure Co. (Measuring pumps), Rochester, Pa.

Gulf State Belting & Hose Co. (Belting and hose), 200 Texas St., Shreveport, La.

Guild & Garrison (Pumps and air compressors), Kent Ave. and South 10th St., Brooklyn, N. Y.

Gulderland Foundry Co. (Iron fittings), Gulderland, N. Y.

Guillott Metal Gasket & Supply Co. (Gaskets), 24 S. Clinton St., Chicago, Ill.

Gulf Refining Co. (Oils), Pittsburgh, Pa.; New York, Philadelphia, Boston, New Orleans, Houston, Atlanta, Louisville.

Gulf States Steel Co. (Wire), Birmingham, Ala.

Gulowsen Sales Corp. (Marine engines), Seattle, Wash.

Gumbinsky Bros. Co. (Wiping cloths), 2261 S. Union Ave., Chicago, Ill.

Gund Mfg. Co., LaCrosse, Wis.

Gurley, W. & L. E. (Surveyors' instruments), Troy, N. Y.; Maritime Bldg., Seattle, Wash.

Gurney Ball Bearing Co. (Bearings and hangers), Jamestown, N. Y.

Gurney Heater Mfg. Co. (Boilers, radiators, etc.), Franklin and Pearl Sts., Boston, Mass.; 11 E. 42d St., New York; 108 N. 17th St., Philadelphia; Gustafson & Scott Mfg. Co. (Saw guards), 4315-25 Wabasha Ave., Chicago, Ill.

Gustin-Bacon Mfg. Co. (Chucks), 1416 W. 12th St., Kansas City, Mo.

Guthard, Edgar C., Co. (Socket wrenches), 361 E. Ohio St., Chicago, Ill.

♦ Gutta Percha & Rubber Mfg. Co., The (Rubber goods), 126-128 Duane St., New York, N. Y.; 301 W. Randolph St., Chicago.

Gwynn Engineering Co. (Gas burners), 100-108 Liberty Ave., Pittsburgh, Pa.

Gwilliam Supply Co. (Couplings, nipples, etc.), 615 Christian St., Philadelphia, Pa.

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H. & A. Lock Co., The (Mach'y guards), 243 44th St., Brooklyn, N. Y.

H. P. Co. (Grinding wheel dressers), 813 Dime Bank Bldg., Detroit, Mich.

H. P. Co. (Grinding wheel dressers), 45 E. Fort St., Detroit, Mich.

Haas, Philip, Co. (Water closets), 123 N. Webster St., Dayton, O.

Hach, Richard G. (Urinal strainers), 159 E. 26th St., New York, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)

Hachenberg Turbine Co., The (Steam turbines), 66 Myrtle Ave., Flushing, N. Y.

Haddon Bin Label Co. (Labels, plumbing shop), Haddon Heights, N. J.

Hadfield-Penfield Steel Co., Bucyrus, O.; Grand Central Palace, N. Y.; 1619 Conway Bldg., Chicago.

Haff & Haff (Bibb screws), 577 Flushing Ave., Brooklyn, N. Y.

Hagan Gas Engine Mfg. Co. (Gas engines), Winchester, Ky.

Hagan, Geo. J., Co. (Furnaces and gas producers), People's Bank Bldg., Pittsburgh, Pa.; Cleveland, O.

Hagan, L. T. (Belt shifters), Winchester, Ky.

Haggard & Marcusson Co. (Steel bunks), 1109 W. 37th St., Chicago, Ill.

Hagman Machine Works (Safety clutches), Solar & W. Division Sts., Syracuse, N. Y.

♦ Hagy, J. Milton, Waste Works, Inc. (Waste), 836-42 Swanson St., Philadelphia, Pa.; 30 Church St., New York, N. Y.; Keenan Bldg., Pittsburgh.

Haines Gauge Co., The (Micrometer gauges), 119 S. 4th St., Philadelphia, Pa.

Haines, William S., & Co. (Valves, traps), S. W. Cor. 12th and Buttonwood Sts., Philadelphia, Pa.

Haines Co., The (Pipe sleeves), 1927-33 W. Lake St., Chicago, Ill.

Haines, Jones & Cadbury Co. (Plumbing supplies), 1130-44 Ridge Ave., Philadelphia, Pa.; Savannah, Richmond, San Francisco, New York.

Halsler Bros. Co. (Machine brushes), 740 N. Franklin St., Chicago, Ill.

Hals, Geo. Mfg. Co. (Coal handling mach'y), Rider Ave. and 141st St., New York, N. Y.

Halcomb Steel Co. (Tool steel), Syracuse, N. Y.

Hald, Emil, Blow Pipe Works (Blowers), Oak and Franklin Sts., Brooklyn, N. Y.

Hale Gas Mixer Mfg. Co. (Gas mixers), 526-532 Lathrop Bldg., Kansas City, Mo.

Hall & Brown Wood Working Machine Co. (Woodworking machinery), 1913-1933 N. Broadway, St. Louis, Mo.; Chicago; New Orleans.

Hall Gas Engine Co., The (Gas engines), Bucyrus, O.

Hall Mfg. Co. (Boring tools), Abington, Mass.

Hall Mfg. Co. (Power plant specialties), 600 William St., Harrison, N. J.

Hall Mfg. Co. (Tackle blocks), Cedar Rapids, Iowa.

Hall Planetary Thread Milling Machine Co. (Bridgesburg, Philadelphia, Pa.

Hall Steam Pump Co. (Pumps), 213 Galveston Ave., Pittsburgh, Pa.

Hall, Wilford, Laboratories (Hand soap), Port Chester, N. Y.

Hallam Engineering & Construction Corp. (Ice and refrig. mach'y), Brooklyn, N. Y.

- Hallden Machine Co. (Tube cutting machines), 27 Benedict St., Waterbury, Conn.
- Hallett Iron Works, The (Bolts, screws, drills, etc.), Harvey, Ill.
- Hamblet Machine Co. (Paper cutters), Lawrence, Mass.
- Hamburg Boiler Works (Tanks and boilers), Hamburg, Pa.
- Hamburg Broom Works (Brooms and brushes), Hamburg, Pa.
- Hamilton-Beach Mfg. Co. (Drills and grinders), Rapids Drive, Racine, Wis.
- Hamilton Caster & Mfg. Co. (Truck casters), 6350 Hanover St., Hamilton, O.; 173 E. Woodbridge, Detroit, Mich.
- Hamilton Copper & Brass Works (Castings), Hamilton, Ohio.
- Hamilton Emery & Corundum Co. (Emery powder and cake), Chester, Mass.
- Hamilton, John, Brass Works (Couplings, etc.), Golden Hill and Middle St., Bridgeport, Conn.
- Hamilton Machine Tool Co., The (Lathes, drills, etc.), Hamilton, O.; 48-50 N. 6th St., Philadelphia.
- ♦ Hamilton Rubber Mfg. Co. (Rubber hose and packing), Trenton, N. J.; New York; Chicago; Philadelphia; San Francisco; Pittsburgh; Boston; New Orleans.
- Hamilton & Hansell (Electric furnaces), Park Row Bldg., New York, N. Y.
- Hamilton Welding & Mfg. Co. (Welding apparatus), Hamilton, O.
- Hamler Boiler & Tank Co. (Tanks, etc.), 66th Pl. and 60th Ave., Clearing Sta., Chicago, Ill.
- Hamlin & Emery Brass Co., The (Brass fittings), 49 Island St., Boston, Mass.
- Hammacher, Schlemmer & Co. (Abrasive paper), 4th Ave. and 13th St., New York, N. Y.
- Hammel Oil Burning Equipment Co., Inc. (Oil burners and furnaces), Providence, R. I.
- Hammel Oil Burner Co. (Oil burners), 609 N. Main St., Los Angeles, Cal.; Boston; New York; Philadelphia.
- Hammett, H. G. (Machinery and tools), Troy, N. Y.
- Hammon Coupler Co., The (Pipe line fittings), Mt. Vernon, O.; Farmers Bank Bldg., Pittsburgh, Pa.; 203 Cole Bldg., Tulsa, Okla.
- Hammond Brass Works (Valves and elbows), Hammond, Ind.
- Hammond, C. & Son (Hammers, hatchets and axes), Ogontz, Pa.
- Hammond-Byrd Iron Co. (Brackets, fittings, etc.), 1711-1719 American Trust Bldg., Birmingham, Ala.; 122 S. Michigan Ave., Chicago; 1749 Sacramento St., San Francisco.
- Hammond Heating Co. (Furnaces), 110 E. Second St., Cincinnati, O.
- Hammond Iron Works (Steel tanks, etc.), Warren, Pa.; 17 Battery Pl., New York.
- Hammond Mfg. Co., The (Drilling and tapping machines), Cleveland, O.
- Hampden Corundum Wheel Co. (Emery wheels, etc.), Brightwood, Springfield, Mass.
- Hampden Paint & Chemical Co. (Factory paints), Springfield, Mass.; Boston, New York.
- Hamrick-Toby Co. (Drinking fountains), Wausau, Wis.
- Hancock Inspirator Co., The (Injectors, valves, etc.), 119 W. 40th St., New York, N. Y.; Chicago, Boston.
- Hancock Mfg. Co. (Oilers, etc.), Charlotte, Mich.
- Hand, John E. & Sons Co. (Nautical equipment), Philadelphia, Pa.; 17 S. Gay St., Baltimore, Md.
- Handlan-Buck Mfg. Co. (Drills, etc.), 210-214 N. 3d St., St. Louis, Mo.
- Handy Mfg. Co. (Clamps), 23 E. Madison St., Chicago, Ill.
- Handy Sack Baler Co. (Sack balers), 631 S. 2d St., East Cedar Rapids, Iowa.
- Hankey, A. C. & Co., Inc. (Machine knives), Worcester, Mass.
- Hanley, S. V. (Vehicle washers), 857 Cambridge Ave., Milwaukee, Wis.
- Hanna Engineering Works (Pneumatic tools), 1775 Elston Ave., Chicago; Sales Agent, Vulcan Engineering Sales Co., Fisher Bldg., Chicago.
- Hannifin Mfg. Co. (Chucks, countershafts, etc.), 621 S. Kolmar Ave., Chicago, Ill.
- Hanover Cordage Co. (Twine and cordage), 240-246 E. Chestnut St., Hanover, Pa.
- Hanscom Cutter Works (Milling cutters), Hyde Park Sta., Boston, Mass.
- Hanson Bros. (Screw machine products), Plainville, Conn.
- Hanson, C. H. & Co., The (Steel stamps), 178 N. Clark St., Chicago, Ill.
- Hanson Clutch & Machinery Co., The (Friction clutch appliances), Tiffin, Ohio.
- Hanson, Jos. (Oil pumps), Inwood, Ia.
- Hanson & Van Winkle Co., The (Plating supplies), 269 Oliver St., Newark, N. J.; 844 W. Erie St., Chicago; 81 Walker St., New York.
- Harbison-Walker Refractories Co. (Fire brick), Farmers' Bank Bldg., Pittsburgh, Pa.; Chicago; Philadelphia; Birmingham, Ala.; New York; Buffalo; Cleveland; Detroit; Boston; Montreal.
- Hardie-Tynes Mfg. Co. (Steam engines and air compressors), Birmingham, Ala.
- Harding Mfg. Co. (Reamers), Mansfield, Mass.
- Hardinge Bros., Inc. (Lathes, etc.), 1770 Berneau Ave., Chicago, Ill.; Toronto, Canada.
- Hardsock, Martin Co., The (Mining tools), Pittsburgh, Pa.
- Hardsock Wonder Drill Co., The (Rock Drills), Ottumwa, Ia.
- Hardt Mfg. Co., The (Spray pumps), Hudson, Mich.
- Hardt Generator Co. (Generators), Easton, Pa.
- Hardware Specialties Co. (Lawn sprinklers), Springfield, O.
- Hardwick Mfg. Co. (Oil and gas burners), Erie, Pa.
- Hardy, F. A. & Co. (Safety goggles), 10 S. Wabash Ave., Chicago, Ill.; Atlanta, Denver, Dallas, St. Paul, San Antonio, Davenport, Ia.; Waco, Texas; Wichita Falls, Kan.
- Hardy, L. Co. (Machine knives), Worcester, Mass.
- Harker Mfg. Co. (Fire protection appliances), 121 West 3rd St., Cincinnati, O.
- Harlem Mfg. Co. (Valves), 685 11th Ave., New York, N. Y.
- Harmon Engineering Co. (Ice and refrigerating machinery), 205 S. Poplar St., Charlotte, N. C.
- Harper Mfg. Co. (Packing), Chester, Pa.
- Harrington & King Perforating Co. (Perforated metals), 634 N. Union St., Chicago, Ill.; 114 Liberty St., New York.
- ♦ Harrington, Edwin, Son & Co., Inc. (Lathes, drills, etc.), 17th & Callowhill Sts., Philadelphia, Pa.; 72 Warren St., New York.
- Harris, Arthur, & Co. (Copper coils, etc.), 212-216 Curtis St., Chicago, Ill.
- Harris Caloric Co. (Welding and cutting), 2328 Washington Ave., Cleveland, O.
- Harris, C. S. Co. (Holists), Rome, N. Y.
- Harris Engineering Co. (Tapping machines), Bridgeport, Conn.
- Harris Municipal Garbage Incinerator & Steam Generator Co. (Garbage burners), 1212 Independent Life Bldg., Nashville, Tenn.
- Harris, A. W. Oil Co. (Oils, etc.), 326-328 S. Water St., Providence, R. I.; 143 N. Wabash Ave., Chicago, Ill.; 100 Maiden Lane, New York, N. Y.
- Harris & Reed Mfg. Co. (Wrenches), 1510 W. 15th St., Chicago, Ill.
- Harrisburg Fdy. & Machine Wks. (Steam engines), Harrisburg, Pa.; 114 Liberty St., New York; Penna. Bldg., Philadelphia; 131 State St., Boston; Park Bldg., Pittsburgh; Empire Bldg., Atlanta; 816 Hennen Bldg., New Orleans; Charles & Lombard Sts., Baltimore; 14 E. Jackson Blvd., Chicago; Bank of Commerce Bldg., St. Louis; 1621 17th St., Denver; 63 First St., San Francisco; Scott-Strovel Bldg., Salt Lake City; 218 Second Ave., S., Seattle; Levy Bldg., Houston.
- Harrisburg Mfg. & Boiler Co. (Boilers, etc.), Harrisburg, Pa.
- Harrisburg Pipe & Pipe Bending Co. (Heaters, etc.), 950 Herr St., Harrisburg, Pa.; Land Title Bldg., Pittsburgh; Western Sales Agent: The Rolph Co., 76 Belvedere St., San Francisco.
- Harrisburg Stamping Co. (Hose clamps), Harrisburg, Pa.
- Harrison Bros., Inc. (Abrasives), Amesbury, Mass.
- Harrison & Co. (Key filing machine), 18 Broadway, New York, N. Y.
- Harrold Tool & Forge Co., The (Forged tools), Columbiana, Ohio.
- Harry Bros. Mfg. Co. (Sinks, strainers, flanges, washers, etc.), 1302 Woodbridge St., E. Detroit, Mich.
- Harry, O. K., Steel Co. (Steel tanks, etc.), 2333-35 Papin St., St. Louis, Mo.
- Hart, B. Franklin, Jr., & Co., 50 Church St., New York, N. Y.
- Hart & Cooley Co., Inc., The (Ventilators, shelving, etc.), New Britain, Conn.; 100 Lafayette St., New York, N. Y.; 73 East Lake St., Chicago, Ill.
- Hart & Crouse Co. (Boilers & radiators), Utica, N. Y.; 29 W. 42d St., New York; 155 N. Clark St., Chicago; Columbus, O.; Minneapolis.
- Hart & Hutchinson Co., The (Metal lockers), New Britain, Conn.; 501 Fifth Ave., New York, N. Y.; 73 East Lake St., Chicago, Ill.; 141 Milk St., Boston, Mass.; 1010 Real Estate Trust Bldg., Philadelphia, Pa.
- Hart Mfg. Co. (Belt fasteners), 24 S. 10th St., St. Louis, Mo.
- Hart Mfg. Co. (Pipe threading tools), Cleveland, O.
- Hart Mfg. Co., The (Drinking fountains), 15th & Madison Sts., Louisville, Ky.
- Hart Mirror Plate Co. (Mirrors & glass shelves), Grand Rapids, Mich.
- Hart Packing Co. (Packing), 144 High St., Boston, Mass.
- Hart, R. A., Mfg. Co. (Counting machines), Battle Creek, Mich.
- Hart-Parr Co. (Engines, gasoline), Charles City, Pa.
- Hartford Drop Forge Co. (Dies and moulds), 846 Windsor St., Hartford, Conn.

- Hartford Machine Screw Co. (Screws)**, 476 Capitol Ave., Hartford, Conn.; 409 Broome St., New York; 4612 Woodward Ave., Detroit; 618 E. Main St., Richmond, Va.; 320 Market St., San Francisco.
- Hartford Mill Supply Co. (Gate valves)**, Pearl & Haynes Sts., Hartford, Conn.
- Hartford Special Machinery Co. (Taper gages)**, 274 Homestead Ave., Hartford, Conn.
- Hartig Standard Gas Engine Co. (Gas engines)**, 14 Commercial St., Newark, N. J.
- Hartley Boiler Works (Boilers, tanks, etc.)**, Montgomery, Ala.
- Hartley, C. J., Co. (Sink pumps)**, Peoria, Ill.
- Hartley-Rose Belting Co. (Leather belting)**, 425 First Ave., Pittsburgh, Pa.
- Hartman Co., The (Pipe & fittings)**, 1231-37 N. Front St., Philadelphia, Pa.
- Hartman Ingot Metal Co. (Metal)**, 2511 W. 21st St., Chicago, Ill.
- Hartwell Iron Works (Feed water heaters)**, Houston, Tex.
- ♦ **Hartz, H. V., Co., The (Tackle blocks)**, cor. Cuyahoga and Mahoning Ave., Cleveland, O.
- Harvey's, A., Sons Mfg. Co., Ltd. (Wrenches)**, 210 First St., Detroit, Mich.  
(See index to advertisement, pages 7, 8 and 9.)
- Harvey Hubbell, Inc. (Machine screws)**, Bridgeport, Conn.; Chicago; San Francisco.
- Haskell, Wm. H., Mfg. Co., The (Bolts, screws & nuts)**, 24 Commerce St., Pawtucket, R. I.
- Haskins, R. G. (Portable grinders)**, 27 S. Desplaines St., Chicago, Ill.
- Haslett Spiral Chute Co., The (Gravity conveyors)**, 510-12 N. 61st St., Philadelphia; 110 W. 34th St., New York; 525 Calvert Bldg., Baltimore; 228 Pine St., San Francisco; 917 Citizens Bldg., Cleveland.
- Hassall, John, Inc. (Rivets & nails)**, 402 Oakland St., Brooklyn, N. Y.
- Hatch Oil Engine Co. (Oil engines)**, New London, Conn.
- Hathaway Mfg. Co., The (Plumbers' chain)**, Bridgeport, Conn.
- Hauck Mfg. Co. (Brazing outfits, torches, etc.)**, Brooklyn, N. Y.; Boston; Philadelphia; Pittsburgh; Baltimore; Buffalo; Chicago.
- Hauer, J. B. (Hooks)**, 23-27 Richardson St., Brooklyn, N. Y.
- Hause, Chas. F., Mfg. Co., Inc. (Pipe joint cement)**, 1812 St. Mary's Ave., Omaha, Neb.
- Havana Mfg. Co. (Gas engines)**, Havana, Ill.
- Havard, O. D., Co. (Coal measuring meters)**, Allentown, Pa.
- Haverhill Fire Appliance Co. (Fire extinguishers)**, 191 Merrimack St., Haverhill, Mass.
- Hawes, C. L. (Lathes)**, 12 Adams St., Ashtabula, Ohio.
- Hawkeye Mfg. Co. (Gas machines)**, Waterloo, Ia.
- Hawkeye Wrench Co. (Wrenches)**, Marshalltown, Ia.
- Hawkins Pump Works (Pumps, Etc.)**, Downers Grove, Ill.; 175 W. Jackson Blvd., Chicago; Harry Verbeek, representative.
- Hawley Down Draft Furnace Co. (Furnaces)**, Easton, Pa.; 90 West St., New York.
- Hawkins, Rollyn (Furnaces)**, 928 Maryland St., Indianapolis, Ind.
- Hayden & Derby Mfg. Co., The (Injectors, etc.)**, 119 W. 40th St., New York, N. Y.; Boston, Chicago.
- Hayden Supply Co. (Belt lacing, bearing metal)**, 236 Pearl St., N. W., Grand Rapids, Mich.
- Haydenville Co., The (Plumbing brass goods)**, Haydenville, Mass.; 150 Nassau St., New York.
- Hayes, James J. (Gauge glass cutters)**, Miller Bldg., Scranton, Pa.
- Hayes Mfg. Co. (Copper boilers)**, 51 McBride Ave., Paterson, N. J.
- Hayes-Ruppel Mfg. Co.**, Ottawa and St. Louis Sts., Grand Rapids, Mich.
- Hayes Pump & Planter Co. (Pumps)**, Galva, Ill.
- Hayner, Norman C., Co. (Boiler compounds)**, Rochester, N. Y.
- Haynes-Langenberg Mfg. Co. (Warm air furnaces)**, 4045-57 Forest Park Blvd., St. Louis, Mo.; 105 N. Alabama St., Indianapolis, Ind.; Auburn, Ind.; 1837 O St., Lincoln, Neb.; West View, Pittsburgh; 547 Sixth Ave., Des Moines; 826 Mission St., San Francisco; 1147 Rainier St., Seattle.
- Haynes Selling Co. (Radiator Valves)**, 1711 Sansom St., Philadelphia, Pa.; 507 Flatiron Bldg., New York; 851 Equitable Bldg., Baltimore, Md.
- Haynes Stellite Co., The (High speed cutting metal)**, 30 East 42nd St., New York.
- ♦ **Hays Mfg. Co. (Iron and brass plumbing goods)**, West 12th St., Erie, Pa.
- Hays, The Jos. W., Corp. (Power plant instruments)**, Michigan City, Ind.
- Hayward Co., The (Clamshell buckets)**, 50 Church St., New York, N. Y.; Philadelphia; Pittsburgh.
- Hayward, S. F., & Co. (Fire department supplies)**, 39 Park Pl., New York, N. Y.
- Hazard Mfg. Co. (Wire rope)**, Wilkes-Barre, Pa.; New York; Chicago; Denver; Pittsburgh, Pa.
- Hazen Mfg. Co. (Pumps)**, Hudson, Mich.
- Heald, John (W. C. tanks)**, 211 E. 3d St., Jamestown, N. Y.
- Heald Machine Co., The (Grinding machines)**, Worcester, Mass.; Chicago; Cleveland; Detroit; Cincinnati.
- Healey Brass Foundry Co., P. (Valves, etc.)**, Evansville, Ind.
- Healy-Ruff Co. (Radiator hangers)**, Minneapolis, Minn.
- Heap, Wm., & Sons (Plumbers' woodwork)**, Grand Haven, Mich.; Trenton, N. J.; 1924 Clybourne Ave., Chicago.
- Heartley Machine, Variety Iron & Tool Works** (presses, punches, shears, etc.), 900-902-904-906-908 Summit St., Toledo, O.  
(See index to advertisement, pages 7, 8 and 9.)
- Heath Grate Bar Co. (Grates)**, 15 School St., Boston, Mass.
- Heating Supply Co. (Heating, boilers)**, 34 E. Lacock St., N. S., Pittsburgh, Pa.
- Hedges & Bro. (Faucets, bibbs, cocks)**, 105 South St., Newark, N. J.
- Hell Co., The (Steel tanks)**, 26th and Montana Sts., Milwaukee, Wis.; 2817 Wentworth Ave., Chicago, Ill.; Greenwood and Holden Aves., Detroit.
- Helland, Geo. W. (Brass and leather goods)**, 107 W. 13th St., New York, N. Y.
- Heine Boiler Co. (Water tube boilers, superheaters)**, 5319 Marcus Ave., St. Louis, Mo.; New York, Boston, Philadelphia, Pittsburgh, Chicago, New Orleans, Cincinnati, Detroit, Denver, Dallas, Charlotte, Cleveland, San Francisco, Phoenixville, Pa.; Toronto.
- Hein Furniture Co., The (Drawing tables)**, 126-136 Huron St., Toledo, O.
- Helms, Alex, Belting Co. (Leather belting)**, 2413 Harrison St., San Francisco, Cal.
- Heinisch's, R. Sons Works (Tinners' snips)**, 109-121 Bruce St., Newark, N. J.; 130 N. State St., Chicago.
- Heller-Aller Co., The (Windmills, pumps, etc.)**, Napoleon, O.
- Heller Brothers Co. (Hand tools)**, Newark, N. J.
- Heller Tool Co. (Blacksmiths' tools)**, Newark, N. J.
- Heller, W. C., & Co. (Store cabinets)**, Montpelier, O., 915 N. Davidson St., Indianapolis, Ind.
- Helme & McIlhenny (Gas meters)**, 1339-1349 Cherry St., Philadelphia, Pa.
- Helwig Mfg. Co. (Pneumatic machinery)**, St. Paul, Minn.
- Hemming Bros. Co., Inc. (Grinding and polishing machines)**, 205-207-209 River St., New Haven, Conn.
- Henderer's, A. L., Sons (Shears, punches, jacks, etc.)**, Maryland Ave. and Beech St., Wilmington, Del.; 143 Chambers St., New York.
- Henderson Bros. (Tumbling barrels)**, 133 S. Leonard St., Waterbury, Conn.
- Henderson, W. K., Iron Works & Supply Co. (Pulleys, machinery, etc.)**, Shreveport, La.
- Henderson-Willis Welding & Cutting Co. (Welding equipment)**, St. Louis, Mo.; Milwaukee; Chicago.
- Hendey Machine Co., The (Lathes, etc.)**, Torrington, Conn.; Chicago, New York, Boston, Rochester.
- Hendley & Whittemore Co. (Woodworking machinery)**, Beloit, Wis.
- Hendrie, W. C., Rubber Co. (Rubber hose belting, etc.)**, Torrance, Cal.; Denver; Los Angeles; San Francisco; Salt Lake City.
- Hendryx, Andrew B., Co., The (Chains)**, New Haven, Conn.
- Henneböhle Co. (Steam specialties)**, 8101 S. Chicago Ave., Chicago, Ill.
- Henry & Allen (Machine knives)**, Auburn, N. Y.
- Henry Bros. (Gas burners and furnaces)**, 193 North St., Massillon, O.
- Henry & Wright Mfg. Co. (Drills)**, 760 Windsor St., Hartford, Conn.
- Heppes-Nelson Roofing Co., The** 1041 Kilburn Ave., Chicago, Ill.; Minneapolis, Minn.; Lockland, O.; Atlanta, Ga.; Melrose Park, Ill.
- Herbert, Alfred, Ltd. (Chucks)**, 50 Church St., New York, N. Y.
- Herbert Boiler Co., The (Boilers)**, Root and LaSalle Sts., Chicago, Ill.; Milwaukee; Atlanta; Salt Lake City.
- Herbrand Co., The (Wrenches)**, 109-125 E. State St., Fremont, O.; Detroit, Philadelphia, Boston, Cincinnati, Los Angeles.
- Hercules Belt Lace Mfg. Co.**, 537 First Natl. Bank Bldg., Chicago; Kansas City; Waukegan, Ill.; Toronto.
- Hercules Cement Product Co. (Laundry trays and flush tanks)**, Howard and Russ Sts., San Francisco, Cal.
- Hercules Chemical Co., Inc. (Drain pipe cleaner)**, 59 Crosby St., New York.
- Hercules Float Works (Copper floats)**, 200-210 Franklin St., Springfield, Mass.
- Hercules Corporation, The (Gas engines)**, Evansville, Ind.
- Hercules Machine & Tool Co., Inc. (Lathes)**, 410 Broome St., New York.
- Hercules Mfg. Co. (Stump pullers)**, Centerville, Ia.

- Hercules Mfg. Co., The (Acetylene gas generators).** 315 Cherry St., Chattanooga, Tenn.
- Hercules Motor Manufacturing Co., The (Gas engines).** Canton, O.
- Hercules Powder Co. (Gunpowder).** Wilmington, Del.; 332 S. Michigan Ave., Chicago; Mark Bank Bldg., Hazleton, Pa.; Commerce Bldg., Pittsburgh; Fulton Bldg., Pittsburgh; 1020 Kearns Bldg., Salt Lake City; Chronicle Bldg., San Francisco; Independence Bldg., Joplin, Mo.; 120 Broadway, New York; 317 Century Bldg., Denver, Colo.; 1524 Pierce Bldg., St. Louis, Mo.; Hercules Powder Sales Co., Bank of Com. Bldg., Memphis; Hercules Powder Sales Co., Knoxville.
- Herlith, O. B., Mfg. Co. (Parallels).** 90 John St., Hartford, Conn.
- Herman Pneumatic Machine Co. (Pneumatic machines).** Zelenople, Pa.; 804 Union Bank Bldg., Pittsburgh, Pa.
- Hermance Machine Co. (Woodworking machinery).** First and Campbell Sts., Williamsport, Pa.
- Herold Bros. Co., The (Wire wheel brushes).** 741 Euclid Ave., Cleveland, O.
- Herrick, George S. (Grates).** 132 N. Warren St., Syracuse, N. Y.
- Herschell-Spillman Co. (Gas engines).** 196 Sweeney St., North Tonawanda, N. Y.
- Hersey Mfg. Co. (Water meters).** E and Second Sts., South Boston, Mass.; 714 Tremont Temple, Boston; 1026 Commercial Trust Bldg., Buffalo; 1315 3d Nat'l Bank Bldg., Atlanta; 174 Fulton St., New York; 211 Schultz Bldg., Columbus; 10 S. La-Salle St., Chicago; 226 Marsh-Strong Bldg., Los Angeles, Cal.; 300 Henry Bldg., Portland, O.
- Hersh Brothers Co. (Heating furnaces).** 658 Mill St., Allentown, Pa.
- Hershey Machine & Foundry Co., The (Steam and oil separators).** Mannheim, Pa.; First St., South Boston.
- Hervey, F. L., & Co., Inc. (Leather belting).** Fall River, Mass.
- Hertz Mfg. Co. (Gas generators).** St. Paul, Minn.
- Hess Bright Mfg. Co., The.** 165 Broadway, New York (Hess Bright and "Monarch" ball bearings, distributed by S K F Industries).
- Hess & Barker (Dumper regulators).** 212-22 S. Darien St., Philadelphia, Pa.
- Hesse-Martin Iron Works (Sawmill machinery, etc.).** 460-74 E. Taylor St., Portland, Ore.
- Hess-Snyder Co., The (Pulleys).** Massillon, O.
- Hess Warming & Ventilating Co. (Heating furnaces).** 5 N. LaSalle St., Chicago, Ill.; Milwaukee, Wis.
- Hessler, H. E., Co. (Roof flanges, etc.).** Syracuse, N. Y.
- Hetherington & Berner (Asphalt pumps).** Indianapolis, Ind.
- Hettinger Engine Co. (Gas engines).** Bridgeton, N. J.
- Hettrick Mfg. Co., The (Canvas and combination belting).** Toledo, O.
- Hewes & Phillips Iron Works (Engines).** Newark, N. J.
- Hewitt, C. B., & Bros. Inc. (Friction boards).** 16-24 Ferry St., New York, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Hewitt Rubber Co. (Mechanical rubber goods).** 240 Kensington Ave., Buffalo, N. Y.; 217 Railway Exchange, Chicago; 111 Broadway, New York.
- Hewitt Sales Co. (Babbitt metal).** 5723 12th St., Detroit, Mich.
- Hibben & Co. (Boilers, tanks, etc.).** 9376-78 Ewing Ave., Chicago, Ill.
- Hibbs, E. A. (Boilers, range).** N. E. Cor. Quarry and Broad Sts., Philadelphia, Pa.
- Hicken Sod-Tor-Lite Co., B. E. (Soldering torches).** Prairie Hill, Mo.
- Hickory Steel-Grip Glove Co., Inc. (Gloves and mittens).** 2640-48 N. Maplewood Ave., Chicago, Ill.
- Hicks Iron Works (Gas engines).** 967 Howard St., San Francisco, Cal.
- Hicks, S. D., & Son (Copper boilers).** 9 Bowker St., Boston, Mass.
- Hide Leather & Belting Co. (Leather belting).** 227 S. Meridian St., Indianapolis, Ind.; Detroit; Evansville, Ind.
- Hiertz, Theodore, Metal Co. (Bearing metal).** Tenth and Poepping Sts., St. Louis, Mo.
- Higgins, John C. (Mill picks).** 812 W. Kinzie St., Chicago, Ill.
- Higgins Machinery Co. (Belt clamps).** Seattle, Wash.
- High Pressure Fitting & Valve Co. (Fittings, ammonia).** 72-74 Putnam St., Paterson, N. J.
- High Speed Hammer Co. (Riveting machines).** 313 Norton St., Rochester, N. Y.
- High Speed Metallic Packing Co. (Metallic packing).** 916 Oakwood Blvd., Chicago, Ill.; 514 Pioneer Press Bldg., St. Paul.
- Highland Electro Chemical Co. (Soldering salts).** Connellsville, Pa.
- Highton, Wm., & Sons (Ventilators, etc.).** Nashua, N. H.; 26 Union St., Boston; 144 Second St., Philadelphia.
- Hightower, C. G. (Range boiler plugs).** Samoa, Humboldt Co., Cal.; 714 Sheldon Bldg., San Francisco.
- Higley Machine Co. (Machine tools).** Croton Falls, N. Y.
- Hilbert Machine Co. (Radial drills).** 2116-22 Colerain Ave., Cincinnati, O.
- Hill, John, Foundry Supply Co. (Foundry supplies and equipment).** Cincinnati, O.; Birmingham, Ala.
- Hill Clutch Co., The (Power transmission machinery).** W. 65th St. and Breakwater Ave., Cleveland, O.; 50 Church St., New York, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Hill-Curtis Co. (Sawmill and woodworking machinery).** Kalamazoo, Mich.; Shreveport, La.
- Hill, C. V., & Co. (Radiator trucks).** Trenton, N. J.
- Hill, M. B., Mfg. Co. (Drill jigs).** 6 Eden St., Worcester, Mass.
- Hill, Wm. E., & Co. (Machinery).** Kalamazoo, Mich.
- Hill & Cutler (Cotton waste).** 176 Federal St., Boston, Mass.; New Bedford, Mass.; Lowell, Mass.
- Hill & Griffith Co., The (Foundry supplies).** 1262 State Ave., Cincinnati, O.; Pittsburgh, Pa.; Birmingham, Ala.
- Hill-Kenton Co. (Gas regulators).** 518 W. Eleventh St., Anderson, Ind.
- Hill Pump Valve Co., The (Pump valves).** 4601 Belmont Ave., Chicago, Ill.
- Hilles & Jones Co. (Machines).** Wilmington, Del.; 235 Oliver Bldg., Pittsburgh, Pa.
- Hilliard Clutch & Machinery Co., The (Friction clutches, etc.).** Elmira, N. Y.
- Hills-McCanna Co. (Oil pumps, etc.).** 2025 Elston Ave., Chicago, Ill.
- Himmelein & Bailey (Leather belting).** 248 Chestnut St., Philadelphia, Pa.
- Hinckley Machine Works, The (Milling attachment).** Hinckley, Ill.
- Hindley & Pendleton Co. (Riveted pipe, etc.).** 74 Greenpoint Ave., Brooklyn, N. Y.
- Hindley Mfg. Co. (Spring cotters).** Valley Falls, R. I.
- Hinds & Coon (Metal polish).** 126 Pearl St., Boston, Mass.
- Hinman, D. A., & Co. (Float valves).** Sandwich, Ill.
- Hinsdale Mfg. Co. (Wrenches).** Fulton & Lincoln Sts., Chicago, Ill.
- Hirsch Rolling Mill Co. (Bars, spikes and bolts).** 6800 Manchester Ave., St. Louis, Mo.
- Hirschman, W. F., Co., Inc. (Ventilators).** 90 Main St., Buffalo, N. Y.
- Hisey-Wolf Machine Co. (Machine tools).** Colerain and Marshall Sts., Camp Washington, Cincinnati, O.
- Hitchings & Co. (Ventilating apparatus).** 100 Louisa St., Elizabeth, N. J.
- Hitner's, Henry A., Sons Co. (Wrought iron washers).** 4501 Richmond St., Philadelphia, Pa.; 30 Church St., New York.
- Hjorth Lathe & Tool Co. (Drilling attachments).** 27 School St., Boston, Mass.
- Hjorth, William, & Co. (Wrenches, etc.).** Jamestown, N. Y.
- Hobbs, Clinton E. (Chain hoists).** 10 Pearl St., Boston, Mass.
- Hobbs Mfg. Co. (Machinery washers, etc.).** 26 Salisbury St., Worcester, Mass.; New York; Chicago.
- Hodge & Stone (Valve wheels).** Middletown, Conn.
- Hodges Water Still Co., Inc. (Water stills).** 5713 Appletree St., Philadelphia.
- Hodgman Rubber Co. (Shower bath curtains, rubber gloves, etc.).** Tuckahoe, N. Y.; 8 West 40th St., New York.
- Hoe, R., & Co. (Saws, files and bits).** 504 Grand St., New York; 544 S. Clark St., Chicago.  
(See index to advertisements, pages 7, 8 and 9.)
- Hoefer Mfg. Company (Drills, etc.).** Freeport, Ill.
- Hoelscher Bros. (Shower baths).** 1301 W. Division St., Chicago, Ill.
- Hoenschel Forged Twist Drill & Tool Co. (Twist drills, etc.).** 1450 Twenty-first St., Detroit, Mich.
- Hoepner Automatic Scale Co. (Sack sewing machines).** 1401 W. Jackson Blvd., Chicago, Ill.
- Hoewel Mfg. Corp. (Sandblast machines).** 154 Ogden Ave., Jersey City, N. J.; 503 American Trust Bldg., Cleveland, O.
- Hoffeld, R., & Co. (Washers).** 63-69 Carroll St., Buffalo, N. Y.
- Hoffman, B., Mfg. Co. (Valves and fittings).** 257-59 Sixth St., Milwaukee, Wis.
- Hoffmann-Billings Mfg. Co. (Plumbing supplies).** 100 Second St., Milwaukee, Wis.
- Hoffman, Corr Mfg. Co. (Rope, cotton waste, etc.).** 318-22 Lafayette St., New York.
- Hoffman, George William, Co. (Metal polish).** 557 E. Washington St., Indianapolis, Ind.; 6 Cliff St., New York; 444 W. Grand Ave., Chicago; 113 Market St., San Francisco.
- Hoffman Heater Co., The (Water heaters).** Lorain, O. (Branches in all principal cities.)  
257-59 Sixth St., Milwaukee, Wis.
- Hoffman Specialty Co. (Valves).** Waterbury, Conn.
- Hoff, M. A., Co. (Stoker grates).** Indianapolis, Ind.
- Hogan Mfg. Co., The (Water closet combinations).** 74 Grove St., Hartford, Conn.

- ♦ **Hogson & Pettis Mfg. Co., The** (Tools), 141 Brewery St., New Haven, Conn.; 42 Murray St., New York; 627 W. Washington Blvd., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Hohnsbeen Mfg. Co. Co.** (Vise liners), Minneapolis, Minn.
- Holbeck Riverside Gas Power Co.** (Gas engines), Oil City, Pa.
- Holbrook Raw Hide Co.** (Rawhide hammers, gears and baskets), Providence, R. I.
- Holcomb Steel Co.** (Steel tool), Syracuse, N. Y.; Boston; New York; Detroit; Philadelphia; Cleveland;
- Holcomb Safety Garment Co.** (Protective clothing), 14 S. Jefferson St., Chicago.  
(See index to advertisement, pages 7, 8 and 9.)
- Holland Engine Co., Inc.** (Engines), Holland, Mich.
- Holland Furnace Co.** (Warm air furnaces), Holland, Mich.
- Holland Instrument So.,** 2314 N. 11th St., Philadelphia.
- Holland Machine Co.** (Electric pumps), 90 W. Broadway, New York, N. Y.; S. Norwalk, Conn.
- Holland Rubber Co.** (Rubber plumbing specialties), 335 Broadway, New York.
- Hollands Mfg. Co.** (Plumbers, gas and steamfitters' tools), 350 E. 18th St., Erie, Pa.
- Hollingshead, R. M. Co., The** (Grease, soap, polish, etc.), Camden, N. J.; San Francisco; Cincinnati; Atlanta; Boston; Chicago; New York; St. Paul; Los Angeles; Denver; Houston; Portland; Detroit; Kansas City; Pittsburgh; Seattle; Spokane.
- Hollingsworth, Wm.** (Pressure blowers), 227-29 N. Holliday St., Baltimore, Md.
- ♦ **Hollow Center Packing Co.** (Packings), 1276 W. Third St., Cleveland, O.; 72 Trinity Pl., New York, N. Y.; Toronto, Ont.
- Holmberg Steam Trap Co., The** (Vacuum traps), Linsborg, Kans.
- Holmes Iron Co.** (Boilers, tanks, etc.), Rutland, Vt.
- Holmes, E. & B., Machinery Co.** (Woodworking mach'y), 51 Chicago St., Buffalo, N. Y.
- Holmes Metallic Packing Co.** (Packing), 45 St. Clements St., Wilkes-Barre, Pa.
- Holmes Mfg. Co.** (Filing machines), Shelton, Conn.
- Holt Electric Co.** (Motors and dynamos), 377-79 S. Pierce St., Milwaukee, Wis.
- Holt Mfg. Co., The** (Mach'y), Stockton, Cal.; Peoria; Los Angeles; Portland; Wichita; Salt Lake City; Memphis; San Francisco; Spokane.
- Holton-Abbott Mfg. Co.** (Valve wheels), 61 Gorham St., West Somerville, Mass.
- Holtum Mfg. Co.** (Cement tools), Freeport, Ill.
- Holtzer-Cabot Electric Co.** (Motors and grinders), 125 Amory St., Roxbury, Boston, Mass.; 6161 S. State St., Chicago, Ill.; 1104 Union Trust Bldg., Baltimore, Md.; 101 Park Ave., New York, N. Y.
- Holyoke Belting Co.** (Belting), 66-68 Winter St., Holyoke, Mass.
- Holyoke Heater Co.** (Heaters, water), Holyoke, Mass.; Boston; New York.
- Holyoke Machine Co.** (Friction clutches), Worcester, Mass.
- Home Mfg. Co.** (Paper balers), Mattoon, Ill.
- ♦ **Home Rubber Co.** (Rubber goods), Woolverton Ave., Trenton, N. J.; Chicago, El Paso, New York, Pittsburgh.
- ♦ **Homestead Valve Mfg. Co., Inc.** (Valves), 134 6th Ave., Homestead, Pa.; 242 Lafayette St., New York (all principal cities).  
(See index to advertisement, pages 7, 8 and 9.)
- Hones, Charles, A., Inc.** (Soldering furnaces), 119 Grand Ave., Baldwin, Long Island, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Honeywell Heating Specialty Co.** (Valves, regulators, etc.), Wabash, Ind.; 141 W. 36th St., New York; Hood Bros. (Mechanics' tools), 180 Oxford St., Philadelphia, Pa.
- Hooker, O. V., & Son** (Mach'y), Perkins St., St. Johnsbury, Vt.
- Hoole Tool & Supply Co.** (Machine keys), 60 Hackensack St., East Rutherford, N. J.
- Hoopes & Townsend Co.** (Bolts, nuts, etc.), 1330 Buttonwood St., Philadelphia, Pa.
- Hoosier Drilling Machine Co.** (Special machinery), Goshen, Ind.
- Hooven & Allison Co., The** (Twines and cordage), Xenia, O.; Kansas City; Minneapolis; Omaha; Seattle; Cincinnati; Covington, Ky.
- Hooven, Owens, Rentschler Co., The** (Steam engines), Hamilton, O.
- Hoover, Alonzo, & Son** (Heating boilers), 119 Main St., Hackettstown, N. J.
- Hoover Steel Ball Co.** (Steel balls), Ann Arbor, Mich.; 3124 Edgemoor Road, Cleveland; 180 N. Market St., Chicago; Middle City Bldg., Philadelphia.
- Hope Engineering & Supply Co.** (Gas engines and heaters), 803-806 Farmers Bank Bldg., Pittsburgh.
- Hope Fan & Blower Co.** (Fans and driers), Kansas City, Mo.
- Hope Forge & Machine Co., The** (Gas engines), Mt. Vernon, Ohio.
- Hopedale Mfg. Co.** (Pumps), Milford, Mass.
- Hopkins, A. E.** (Lathe attachments), Middletown, N. Y.
- Hoppen, J. E., & Sons** (Grindstones), 70-74 Main St., Belleville, N. J.
- Hoppes Mfg. Co., The** (Steam separators, etc.), James St. and Belmont Ave., Springfield, O.; 39 Cortlandt St., New York; 343 S. Dearborn St., Chicago.
- Hopson & Chapin Mfg. Co., The** (Boilers), 231 State St., New London, Conn.
- Horner, S. E., Co.** 'Strainers', Bridgeton, N. J.
- Hornung, J. C.** (Steam traps), 343 S. Dearborn, Chicago, Ill.
- Horsburgh & Scott Co., The** (Gears), 5114 Hamilton St., N.E., Cleveland, O.
- Horsting Leather Stretcher Co.** (Belt stretching machines), 38 S. Dearborn St., Chicago, Ill.
- Horstmann, Wm. H., Co.** (Foundrymen's foot protectors), 5th and Cherry Sts., Philadelphia, Pa.; 222 4th Ave., New York.
- ♦ **Horton, E., & Son Co.** (Chucks, etc.), Windsor Conn.
- Horton Machine Works** (Gas engines and mach'y), Elmira, N. Y.
- Hoskins Mfg. Co.** (Pyrometers and electric furnaces), 4445 Lawton Ave., Detroit, Mich.; Boston, Chicago, New York, Pittsburgh, San Francisco.
- Hosmer, G. A., Co.** (Lubricants, belt dressing, etc.), 375 Ellicott St., Buffalo, N. Y.
- Hostetler & Co., J. F.** (Boiler cleaners), Mulvane, Kan.
- Hotchkiss Engineering Corp.** (Boiler furnaces), Randolph Bldg., Memphis, Tenn.
- Hot-Flo Faucet Corp.** (Electric water heater), 1400 Broadway, New York; 620 Ashland Bldg., Chicago, Ill.
- Hotstream Heater Co.** (Gas water heaters), 1287 Marquette Rd., Cleveland, O.
- Hotwat Distributing Co.** (Water heaters), 402 Title Insurance Bldg., Los Angeles, Cal.
- Houchin-Aiken Co.** (Machinery), 113 53d St., Brooklyn, N. Y.
- Houchin, Thos. W., Co., Inc.** (Stoves), 36-38 E. 12th St., New York, N. Y.
- Hough, Charles N., Mfg. Co., The** (Oil well supplies), Franklin, Pa.
- Houghton, E. F. & Co.** (Oils, packings, etc.), Third, American and Somerset Sts., Philadelphia, Pa.; New York; Cleveland; Detroit; St. Louis; Buffalo; Boston; Syracuse; Hartford; Pittsburgh; Chicago; Albany; Troy; Cincinnati; San Francisco; Portland; Seattle, Wash.
- House, Chas. W., & Sons** (Felt washers), Unionville, Conn.
- Household Granite Tub Co.** (Laundry trays), 222 Boulevard, New Haven, Conn.; 4615 Girard Ave., Philadelphia, Pa.; 383 Girard Ave., Buffalo, N. Y.
- Houston, Stanwood & Gamble Co.** (Engines and boilers), P.O. Box 821, Cincinnati, O.; 3d and Philadelphia Sts., Covington, Ky.
- Howard, E., Clock Co.** (Clocks), 373 Washington St., Boston, Mass.; 309 Broadway, New York; 31 N. State St., Chicago.
- Howard Iron Works** (Power transmission mach'y), Chicago and Granger Sts., Buffalo, N. Y.; Peoples Gas Bldg., Chicago.
- Howard, H. J. M., Mfg. Co.** (Hose racks, fire extinguishers), 150 Pierce St., Washington, D. C.; 258 Broadway, New York.
- Howard & Morse** (Steam engines, fans, etc.), 45 Fulton St., New York, N. Y.
- Howard, James L., Co.** (Railway water closets), Hartford, Conn.
- Howard, W. R.** (Screw anchors), 461-475 5th Ave., New York; 808 State-Lake Bldg., Chicago.
- Howe Chain Co.** (Factory trucks), 110 East Clay Ave., Muskegon, Mich.; 30 Church St., New York.  
(See index to advertisement, pages 7, 8 and 9.)
- Howe Safety Appliance Co.** (Machine guards), Granite City, Ill.
- Howe Scale Co. of Illinois** (Scales and factory trucks), 1222-26 S. Wabash Ave., Chicago, Ill.; Minneapolis, Cleveland, Kansas City, St. Louis.
- Howell & Murray** (Machinists' clamps), Waverly, N. Y.
- Howell, R. R., & Co.** (Feed mills), Minneapolis, Minn.
- Howells Mining Drill Co.** (Drills), Plymouth, Pa.
- Hoves, S., Co., The** (Rice machinery), Silver Creek, N. Y.
- Howlett, P. L.** (Baling presses), P. O. Box 454, Brownwood, Tex.
- Hoysradt & Case** (Grinders), Kingston, N. Y.
- Hoyt Metal Co.** (Bearing metal, etc.), Boatmen's Bank Bldg., St. Louis; 940 W. Huron St., Chicago.
- Hub Machine Welding & Contracting Co., The** (Saw tables), 22d and Race Sts., Philadelphia, Pa.
- ♦ **Hubbard & Co.** (Wrought iron washers), 63d and Butler Sts., Pittsburgh, Pa.
- Hubbard Motor Co., The** (Gas engines), Middletown, Conn.
- Hubbert, B. H.** (Steam jacketed kettles), 3601-3 E. Pratt St., Baltimore, Md.
- Huber Mfg. Co., The** (Traction engines), Marion, O.
- Hudson Belt-Fastener Co.** (Belt fasteners and wire lacing), 151 Church St., New York, N. Y.
- Hudson Belting Co.** (Leather belting), 1-3 Eaton Pl., Worcester, Mass.

- Hudson Boiler Mfg. Co. (Heating boilers), 359 W. 42d St., New York, N. Y.; 200 Devonshire St., Boston; Bulletin Bldg., Philadelphia.
- Hudson Brass Works** (Shower baths and lighting fixtures), 154 Nassau St., Brooklyn, N. Y. (See Index to Advertisements, pages 7, 8 and 9.)
- Hudson Pump Co., Inc. (Lubricant pumps), Jersey City, N. J.
- Hudson Mechanical Rubber Co. (Mechanical rubber goods), 50 Church St., New York, N. Y.; Washington; Pittsburgh; Boston; Allentown, Pa.; St. Louis, Mo.; Chicago; Knoxville, Tenn.; Los Angeles, Cal.
- Hudson-Sharp Machine Co. (Pumps and machinery), 1207 Main St., Green Bay, Wis.
- Huebel Mfg. Co. (Oilers), Newark, N. J.
- Hughes Bros. (Miners' lamps), 410 N. 9th Ave., Scranton, Pa.
- Hughes Electric Heating Co. (Electric ovens), 5660 Taylor St., Chicago, Ill.; 232 Old South Bldg., Boston, Mass.
- Hughes-Evans Co., Inc. (Railings and fittings, brass), 502 W. 32nd St., New York, N. Y.
- Hughes Tool Co. (Drills and machinery), 300 Hughes St., Houston, Tex.
- Huhn Mfg. Co. (Metallic packing), Arlington, N. J.; 35 N. Dearborn St., Chicago; 233 Broadway, New York; 330 Venture St., Pittsburgh, Pa.
- Hugo Mfg. Co. (Pressure regulators, etc.), 49th Ave. West and Superior St., Duluth, Minn.; New York; St. Louis; San Francisco; Savannah, Ga.
- Hull, F. A., Son (Acetylene gas generators), Danbury, Conn.
- Hull Leather Belting Co., 1269 W. 9th St., Cleveland, O.
- Hulson Grate Co. (Grates), Keokuk, Ia.
- Humphrey Co. (Heaters), N. Rose St., Kalamazoo, Mich.; Chicago; St. Louis; Cincinnati; New Orleans; San Francisco; Los Angeles; Ft. Worth; New York; Detroit; Atlanta; Brooklyn; Portland; Oakland; Indianapolis; St. Paul; Cleveland; Grand Rapids.
- Humphrey Gas Pump Co. (Pumps), 401 S. A. & K. Bldg., Syracuse, N. Y.
- Humphrey, H. W. (Washers), Unionville, Conn.
- Humphreys Mfg. Co., The (Hand and power pumps, sanitary enameled iron and brass plumbing ware), Mansfield, O.; 50 West St., New York; 1800 Fisher Bldg., Chicago, Ill.
- ◆ **Hungerford, C. T., Brass & Copper Co.** (Metal goods), 80 LaFayette St., New York, N. Y.; Lombard and South Sts., Baltimore; Postal Telegraph Bldg., San Francisco; 93-95 Broad St., Boston; 510 Arch St., Philadelphia.
- Hungerford & Terry, Inc. (Filters, etc.), 1110 Pennsylvania Bldg., Philadelphia, Pa.
- Hunt Brass Works (Spray pumps), 1617-19 Winona Ave., Chicago, Ill.
- Hunt, C. W., Co., Inc. (Engines, mach'y, etc.), 1580 Richmond Terrace, West New Brighton, N. Y.; 61 Broadway, New York; State Bank Bldg., Richmond, Va.; Rhodes Bldg., Atlanta; 865 Monadnock Bldg., San Francisco; 1616 Fisher Bldg., Chicago.
- Hunt, Helm, Ferris & Co. (Tackle blocks), Harvard, Ill.; Industrial Bldg., Albany, N. Y.
- Hunt, James B., Mfg. Co. (Fire extinguishers, etc.), Forst-Richey Bldg., Trenton, N. J.
- Hunt, Rodney, Machine Co. (Bearings, blocks, holsts, pumps, etc.), Orange, Mass.; 70 Kilby St., Boston.
- Hunter Fan & Motor Co. (Electric fans and water motors), Fulton, N. Y.
- Hunter, James, Machine Co. (Power transmission mach'y), North Adams, Mass.; 70 Kilby St., Boston, Mass.
- Hunter Pressed Steel Co. (Grease cups), Lansdale, Pa.
- Hunter Saw & Machine Co. (Circular saws), 57th and Butler Sts., Pittsburgh, Pa.; Detroit, Philadelphia.
- Huntsville Foundry & Machine Works (Power transmission mach'y), Huntsville, Ala.
- Hurlburt-Rogers Machine Co. (Cutting-off machines), South Sudbury, Mass.
- Hurst, H. L., Mfg. Co. (Spraying machines, etc.), Greenwich, O.
- Hussey, C. G. & Co. (Roofing nails), Pittsburgh, Pa.
- Hussey, C. G. & Co. (Copper rivets, sheet and bar copper, etc.), 2850 Second Ave., Pittsburgh, Pa.
- Hussey, McCann & Co. (Grease extractors), 87 Warren St., New York, N. Y.
- Hussman, Harry L. (Tool grinders), St. Louis, Mo.
- Hutchison Vapor Heating Corp. (Vacuum heating specialties), Woodward Bldg., Washington, D. C.
- Hutchison Vapor Heating Corp. (Vacuum heating system), Woodward Bldg., Washington, D. C.
- Hutchinson, Thomas H. (Basin wastes and shower heads), 110 W. 34th St., New York.
- Huther Bros. Saw Mfg. Co., Inc. (Saws), 1190 University Ave., Rochester, N. Y.; 1330 St. Clair Ave., Cleveland; 106 N. 3rd St., St. Louis, Mo.
- Hutter, Karl, Inc. (China knobs, buttons, pulls, etc.), 241 Lafayette St., New York, N. Y.
- Huyette, Paul B., Co., Inc. (The (Steam specialties), 5 South 18th, Philadelphia, Pa.; 149 Broadway, New York.
- ◆ **Hyatt Roller Bearing Co.** (Power transmission machinery), Harrison, N. J.; Cass & Bvd., Detroit; 2715 So. Michigan Ave., Chicago.
- Hyde, Clinton (W. C. ranges), 592 Clinton Ave., Albany, N. Y.
- Hyde Regulator Mfg. Co. (Damper regulators), Westfield, N. Y.
- Hydraulic Iron Works (Organ blowing motors), Erie, Pa.
- Hydraulic Oil Storage Co. (Oil storage equipment), 22 Albany St., New York, N. Y.
- Hydraulic Press Mfg. Co. (Hydraulic presses and pumps), Mt. Gilead, O.; 39-41 Cortlandt St., New York; New York Mutual Life, Buffalo; Kirby Bldg., Cleveland; Kresge Bldg., Detroit; 365 Market St., San Francisco.
- Hydraulic Specialty Co. (Baths, basins, etc.), 427 Walnut St., Philadelphia, Pa.
- Hydrex Asphalt Products Corp., The (Paints, felts), 170 Broadway, New York, N. Y.
- Hydro Heater Co. (Heaters, gas), Oliver Bldg., Pittsburgh, Pa.
- Hydrometer Co., The (Water meters), 953-55 N. Main St., Los Angeles, Cal.
- Hygeia Can Co., Inc. (Waste cans), 139 Franklin St., New York City.
- Hygeia Filter Co. (Water filters), 3422 Denton Ave., Detroit, Mich.; 70 W. Lake St., Chicago; 371 Pearl St., Buffalo; 1523 Commerce St., Dallas; 162 William St., New York; 871 Market St., San Francisco.
- Hygienic Products Co., The (Enamel cleaner), Canton, O.; 233 Broadway, New York, N. Y.; 130 N. Wells St., Chicago, Ill.
- Hyland, W. J., Mfg. Co. (Ball cocks), 153 Dwight St., Springfield, Mass.
- Hy-Speed Wrench Co. (Wrenches), 2620 W. 48th St., Chicago.
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- Iceland Machine & Foundry Co., Inc. (Machinery, holsts), Norwich, N. Y.
- Iceless Machine Co. (Refrigerating machines), 1067 E. 152d St., Cleveland, O.
- Ide, A. L., & Sons (Steam engines), 313 N. 5th St., Springfield, Ill.
- Ideal Automatic Governor Co., Inc. (Pumps, governors), 164 Emmet St., Newark, N. J.
- Ideal Bronze Co., The (Castings), 1265 E. 55th St., Cleveland, O.
- Ideal Case Hardening Compound Co. (Case hardening compound), 107 Water St., New York, N. Y.
- Ideal Chemical Co., Inc.** (Boiler compounds), 20 S. Senate Ave., Indianapolis, Ind. (See Index to advertisements, pages 7, 8 and 9.)
- Ideal Clamp Mfg. Co. (Hose clamps), 200 Bradford St., Brooklyn, N. Y.
- Ideal Concrete Machinery Co. (Concrete mixers), 1322 Monmouth Ave., Cincinnati, O.
- Ideal Co., The (Acetylene gas generators and burners), Johnstown, Pa.
- Ideal Engine Co. (Gas engines), Lansing, Mich.
- Ideal Fire Detector Co. (Fire detectors), 374 Plane St., Newark, N. J.
- Ideal Foundry & Machinery Co. (Heads, dies), Beaver Falls, Pa.
- Ideal Furnace Co. (Heating furnaces and boilers), 251 W. Jefferson St., Detroit, Mich.; Buffalo, Cedar Rapids, Ia.; Flint, Mich.
- Ideal Heating Co. (Heating boilers and wall radiators), 915 Gates Ave., Brooklyn, N. Y.
- Ideal Metallic Packing Co. (Metallic packing), South Stillwater, Minn.
- Ideal Mfg. & Supply Co. (Heating boilers, fittings, etc.), Oskaloosa, Ia.
- Ideal Specialty Co. (Vacuum heating specialties), Helena, Mont.
- Ideal Ventilator Co. (Ventilators), 160 Atlantic Ave., Providence, R. I.; Boston, Chicago, Cincinnati, Detroit, New York, Washington.
- Igoe Brothers (Wire nails), Newark, N. J.
- Ilg Electric Ventilating Co. (Fans and blowers), 154 Whitting, Chicago, Ill.
- Illinois Boiler Cleaning Compound Co. (Boiler compound), 1338 N. La Salle St., Chicago, Ill.
- Illinois Engineering Co. (Vacuum heating system), Racine Ave. and 21st St., Chicago, Ill.; New York, Los Angeles, San Francisco.
- Illinois Fire-Proof Covering Co., Inc. (The (pipe covering and boiler asbestos), 216 W. Kinzie St., Chicago).
- Illinois Flower Box Co. (Radiator shields), 186 N. La Salle St., Chicago, Ill.
- Illinois Iron & Bolt Co. (Engine jacks and anvils), Carpentersville, Ill.
- Illinois Malleable Iron Co.** (Plumbers' steam, gas and water works supplies), 1801-25 Diversey Blvd., Chicago, Ill. (See Index to advertisement, pages 7, 8 and 9.)
- Illinois Mfg. & Supply Co. (Cutting compounds), 1455 S. Michigan Ave., Chicago, Ill.
- Illinois Mechanical Leather Co. (Leather belting), 46 W. Kinzie St., Chicago.



- Illinois Pump & Brass Co. (Water supply systems), 205 Bridge St., Peoria, Ill.
- Illinois Smelting & Refining Co. (Bearing metal, etc.), Kinsie and Peoria Sts., Chicago, Ill.
- Illinois Specialty Mfg. Co. (Gas heaters), Bloomington, Ill.
- Illinois Steel Co. (Steel), 208 S. LaSalle St., Chicago, Ill.
- Illinois Stoker Co. (Chain grate stokers), Alton, Ill.
- Illinois Thresher Co. (Engines and threshers), Sycamore, Ill.
- Illinois Tool Works (Gears), 154 E. Erie St., Chicago, Ill.; Buffalo, Denver, Marysville, Mich.; Detroit, Indianapolis, New York, San Francisco.
- Illinois Zinc Co. (Spelter and zinc), Peru, Ill.
- Illuminated Level Co. (Levels), Cliftondale, Mass.
- Imperial Bearing Co. (Ball bearings), 6635 Forest Ave., Detroit, Mich.
- ◆ Imperial Belting Co. (Belting), Lincoln and Kinzie Sts., Chicago, Ill.; 42 Broadway, New York.
- Imperial Brass Mfg. Co., The (Plumbers' specialties and welding outfits), 513 S. Racine Ave., Chicago, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Imperial Chemical Co., The (Boiler compound), 514 N. American St., Philadelphia, Pa.
- Imperial Filter Mfg. Co. (Water filters), 1010 Olive St., St. Louis, Mo.
- Imperial Machine Co. (Gasoline engines), 1611 Central Ave., Minneapolis, Minn.
- Imperial Packing Corp. (Packings), 191 Greenwich St., New York.
- Imperial Polish Co. (Metal polish), 54 N. 2d St., Philadelphia, Pa.
- Imperial Tool & Machine Co. (Sheet metal tools), 1630 Ashland Ave., Indianapolis.
- Improved Appliance Co. (Combustion and gas engineers), 419 Kent Ave., Brooklyn, N. Y.
- Improved Gauge Mfg. Co. (Gauges, etc.), 101-105 Canal St., Syracuse.
- Improved Sanitary Fixture Co. (Bath and lavatory combined), 612 Metropolitan Bldg., Los Angeles.
- Improved Surface Mfg. Co. (Belt dressing), 227 Tremont St., North Tonawanda, N. Y.
- Incandescent Light & Stove Co., The (Gas generators), Madisonville St., Cincinnati, O.
- Independent Pneumatic Tool Co. (Pneumatic tools), 600 W. Jackson Blvd., Chicago, Ill.; Boston, Birmingham, Ala.; Cleveland, O.; Detroit, Mich.; New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Montreal, Toronto.
- Indiana Air Pump Co. (Air pumps), 816 Indiana Pythian Bldg., Indianapolis, Ind.
- Indiana Foundry Co. (Sand dryers), Indiana, Pa.
- Indiana Fan Co. (Fans and blowers), 32-40 E. South St., Indianapolis, Ind.
- Indiana Rubber & Insulated Wire Co., The (Mechanical rubber goods), Jonesboro, Ind.
- ◆ Indianapolis Brush & Broom Mfg. Co. (Factory brooms and brushes), 26-30 Brush St., Indianapolis, Ind.; 60 Commerce St., Boston; 220 Broadway, New York.
- Indian Refining Co. of New York (Oils, grease, belt dressing), 244 Madison Ave., New York, N. Y.
- ◆ Indiana Steel & Wire Co., Muncie, Ind.
- Indicating Calipers Co. (Calipers), 506 E. 19th St., New York, N. Y.
- Individual Towel & Cabinet Service Co. (Towel holders), 3258 Graves Court, Chicago, Ill.
- Industrial Electric Furnace Co. (Electric furnaces), 53 W. Jackson Blvd., Chicago, Ill.
- Industrial Oxygen Co. (Welding apparatus), Hanover Bank Bldg., New York, N. Y.
- Industrial Requirements Co. (Grease cups), 136 Chestnut St., Philadelphia, Pa.
- Industrial Supply Co., Machinery Brick Bldg., Keokuk, Iowa.
- Industrial Works, The (Cranes, etc.), Bay City, Mich.; Brown-Marx Bldg., Birmingham; 50 Church St., New York; Widener Bldg., Philadelphia; McCormick Bldg., Chicago; Book Bldg., Detroit.
- Ingalls & Co. (Friction board), Castleton, N. Y.
- Ingersoll Milling Machine Co., The (Milling machines), Rockford, Ill.
- Ingersoll-Rand Co. (Mach'y and tools), 11 Broadway, New York, N. Y.; 343 So. Dearborn St., Chicago; Williamson Bldg., Cleveland; 1223-5 Farmers Bank Bldg., Pittsburgh; Commercial Trust Bldg., Philadelphia; 300 N. Broadway, St. Louis; 32 Oliver St., Boston; El Paso, Tex.; Knoxville; 139 Townsend St., San Francisco; 1036 Union Oil Bldg., Los Angeles, Cal.; Dooley Block, Salt Lake City; Birmingham; American Trust Bldg., Denver; Butte; Seattle; Tacoma; Duluth; Joplin, Mo.; St. Paul; Kansas City.
- Ingle Corporation, The (Mach'y), Rochester, N. Y.
- Inglis Mfg. Co. (Gasoline storage systems), 283 Fifth Ave., Milwaukee, Wis.
- Ingram-Richardson Mfg. Co. (Danger signs), Beaver Falls, Pa.
- Inland Electric Co. (Electric lamp fittings), 16 N. Franklin St., Chicago, Ill.
- Inland Steel Co. (Steel), First Nat'l Bank Bldg., Chicago, Ill.
- Insley Mfg. Co. (Contractors' brackets and holsts), Olney and E. St. Clair Sts., Indianapolis, Ind.
- Instantaneous Fire Extinguisher Co., The (Fire extinguishers), Ardsley-on-Hudson, N. Y.
- Instantaneous Water Heating Co., The (Heaters), Kalamazoo, Mich.
- Insulative Co. (Gasfitters' cement), 1 Broadway, New York, N. Y.
- International Boiler Compound Co. (Boiler compounds etc.), 2729-31 Quinn St., Chicago, Ill.
- International Boiler Works Co. (Boilers), East Stroudsburg, Pa.; Arcade Bldg., Philadelphia.
- International Clay Machinery Co. (Dry kilns), Dayton, O.; 2223 Farmers Bank Bldg., Pittsburgh; 38 Park Row, New York; 19 Nanton Ave., Toronto.
- International Couplers Co., The (Train nine coupler), 239 4th Ave., Pittsburgh, Pa.
- ◆ International Electric Co. (Glue heaters), Indianapolis, Ind.
- International Engineering Co. (Drilling machines), 206 Soc. for Sav. Bldg., Cleveland, O.
- International Engineering Works, Inc. (Steam boilers), Framingham, Mass.
- International Filter Co. (Water filters), 38 S. Dearborn St., Chicago, Ill.; Woolworth Bldg., New York, N. Y.; Arrott Bldg., Pittsburgh; Monadnock Bldg., San Francisco.
- International Glue Co. (Belt cement), 325 Marginal St., East Boston, 28 Mass.
- International Harvester Co. of America, Inc. (Gas engines), 606 S. Michigan Ave., Chicago, Ill.
- International Heating Co. (Oil burners), 4552 N. Broadway, St. Louis Mo.
- International High Speed Steel Co. (Tool steel), 99 Nassau St., New York, N. Y.; El Paso, Tex.; Joplin, Mo.; Spokane, Wash.; Scranton, Pa.; San Francisco.
- International Lubricants Co., Ltd. (Cutting lubricant), Evanston, Ill.
- International Machine Tool Co. (Lathes), 1124 W. 21st St., Indianapolis.
- International Metal Polish Co. (Metal polish), Quill St. and Belt Ry., Indianapolis, Ind.; New York, N. Y.
- International Metal Reclaiming Corp. (Grinding mach'y), 220 Broadway, New York.
- International Motor Co. (Trucks, fire engines, etc.), 64th St. and West End Ave., New York, N. Y.
- International Nickel Co. (Monel metal), 67 Wall St., New York.
- International Oxygen Co. (Oxygen and hydrogen generators), 796 Frelinghuysen Ave., Newark, N. J.; Chicago; Pittsburgh, Toledo, 817 Chicago Stock Exchange Bldg., Chicago, Ill.
- International Sprinkler Co. (Sprinkler systems), 123 William St., New York, N. Y.; 2019 Washington Ave., Philadelphia.
- Inter-Ocean Oil Co. (Lubricating oils), 171 N. Green St., Chicago, Ill.; Kansas City, Mo.
- Interstate Equipment Co. (Concrete mixers), South Bend, Ind.
- Interstate Iron & Steel Co. (Iron and steel bars), 104 S. Michigan Ave., Chicago, Ill.; New York; Cleveland; Detroit; St. Paul; San Francisco.
- Interstate Machine Products Co., Inc. (Lubricators), 54 Allen St., Rochester, N. Y.
- Invincible Blow Pipe Co., The (Blower system equipment), 2527-29 Homer St., Chicago, Ill.
- Invincible Mfg. Co. (Belt dressing), Central Nat'l Bank Bldg., Columbus, O.
- Iowa Foundry & Mfg. Co. (Concrete mixers), Ft. Dodge, Iowa.
- Iowa Valve Co. (Fire hydrants), Oskaloosa, Ia.
- Ireland Machine & Foundry Co. (Woodworking machinery), Norwich, Conn.
- Ireland & Matthews Mfg. Co. (Plumbing specialties), 1505 Beard Ave., Detroit, Mich.
- Ireson, Chas. L. (Leather belting), 221 High St., Boston, Mass.
- Iron City Products Co. (Lifting jacks), 7501 Thomas Blvd., Pittsburgh, Pa.
- Iron City Sanitary Mfg. Co. (Baths, lavatories, etc.), Oliver Bldg., Pittsburgh, Pa. Works: Zellenople, Pa.
- Iron City Tool Works, Ltd. (Railroad track tools), 3201 Smallman St., Pittsburgh, Pa.
- Ironsides Co., The (Belt dressing, etc.), Columbus, O.
- Ironsides Pottery Co. (Sanitary earthenware), Bordentown, N. J.
- Ironton Incandescent Light & Supply Co., The (Gas heaters), Ironton, O.
- Ironton Punch & Shear Co. (Punches and shears for metal working), Ironton, O.
- Ironton Stove & Mfg. Co. (Gas burners), Ironton, O.
- Iroquois Nipple Works (Iron pipe nipples), 306 Genesee St., Buffalo, N. Y.
- Irvington Mfg. Co., The (Tools), Irvington, N. J.
- ◆ Irwin Auger Bit Co., The (Augers and bits), Wilmington, O.
- Isaacson, L. G., Co., Inc. (Belt cement, bearing metal, etc.), 900-12 East Wishkah St., Aberdeen, Wash.; Raymond, Wash.
- Isko Company (Refrigerating machinery), 2525 Clybourn Ave., Chicago, Ill.
- Ives Mfg. Co. (Electric pumps), 203 Hanover St., Baltimore, Md.

- Ives, The W. A., Mfg. Co. (Wood bits), Wallingford, Conn.
- Ivored Covering Co., The (Seats, hooks, holders, etc.), 36 Brown Place, Waterbury, Conn.
- Iwan Bros. (Earth augers), 1503 Prairie Ave., South Bend, Ind.
- I. X. L. Pump & Mfg. Co. (Plumbing specialties), 957-961 N. 9th St., Philadelphia, Pa.
- J
- Jack, A. W., Corp. (Millboard), Lockport, N. Y.
- Jackville Mfg. Co. (Pipe nipples), 615 E. 134th St., New York.
- Jackson Compressor Co. (Air compressors), 237 S. Cherokee St., Denver, Colo.
- Jackson Iron Works, Byron (Power pumps and pumping engines), 410 Sharon Bldg., San Francisco, Cal. Los Angeles, Calif.; Portland Ore.; Salt Lake City, Utah.
- Jackson, Isaac, Belt Fastener Co. (Belt fasteners), 51 Barclay St., New York, N. Y.  
(See index to advertisement, pages 7, 8 and 9.)
- Jackson Machine Tool Co. (Milling machines), Jackson, Mich.
- Jackson Mfg. Co. (Auger bits), Jackson, O.
- Jackson Mfg. Co. (Wheelbarrows), Harrisburg, Pa.; 114 Liberty St., New York.
- Jackson Mills Emery Co. (Supplies and apparatus, electro-plating), Easton, Pa.
- Jackson & Church Co. (Mach'y), Saginaw, Mich.
- Jackson, S. Robert (Levels, carpenter's), Watertown, N. Y.
- Jacobs, Chas., & Co. (Feed water heaters), 258 Franklin St., Boston, Mass.
- ♦ Jacobs Mfg. Co., The (Drill chucks), 32 Union Ave., Hartford, Conn.
- ♦ Jacobson, I. M., & Sons Co. (Babbitt metals), 70-72 Catherine St., Detroit, Mich.; Chicago; New York; Minneapolis.
- Jacobson Gas Engine Co. (Oil engines), Albany, N. Y.
- Jaeger Machine Co. (Concrete mixers), Columbus, O.
- Jahant Foundry & Heating Co. (Heating furnaces), 148 Steiner Ave., Akron, O.
- Jambor Mfg. Co. (Engineers' specialties), 911 Center St., Milwaukee, Wis.
- James, D. O. Mfg. Co. (Gears), 1120 W. Monroe St., Chicago, Ill.
- James Mfg. Co. (Barn equipment), Fort Atkinson, Wis.
- Jamestown Boiler Works (Boilers, etc.), Jamestown, N. Y.
- Jamieson, M. W., & Co. (Pumps), Warren, Pa.
- Jamison, T. H. (Exhaust mufflers, gas burners), Claysville, Pa.
- Janney, Steinmetz & Co. (Steel tanks, etc.), 1421 Chestnut St., Philadelphia, Pa.; 30 Church St., New York, N. Y.
- Janos Asbestos Co. (Packing), 26 Cortlandt St., New York.
- Jansen-Peterson Co., The (Mach'y), 1688 Columbus Rd., Cleveland, O.
- Jarecki Mfg. Co. (Plumbers' and steamfitters' tools, etc.), Erie, Pa.
- Jarvis, Charles L. Co., The (Chucks), Gildersleeve, Conn.
- Jarvis Engine & Machine Works (Steam specialties), Lansing, Mich.
- Jeffers, Richard W., Co. (Steel lockers), Camden, N. J.
- ♦ Jefferson Union Co. (Unions), Lexington, Mass.  
(See index to advertisement, pages 7, 8 and 9.)
- ♦ Jeffrey Mfg. Co. (Mach'y), First and Fourth Sts., Columbus, O.; New York; Boston; Pittsburgh; Chicago; Denver; St. Louis; Birmingham; Charleston, W. Va.; Dallas, Milwaukee, Philadelphia, Cleveland, Scranton, Buffalo, Detroit, Los Angeles, Middlesboro, Ky.; Montreal.
- Jelliff, C. O., Mfg. Corp. (Wire strainers), Southport, Conn.
- Jenckes, E., Mfg. Co. (Belt hooks), 28 Union St., Worcester, Mass.
- ♦ Jenkins Bros. (Valves and packing), 80-88 White St., New York, N. Y.; 524 Atlantic Ave., Boston; 133 N. 7th St., Philadelphia; 646 Wash. Boul., Chicago; Elizabeth, N. J.; Bridgeport, Conn.; Pittsburgh; Washington; San Francisco; St. Louis.  
(See index to advertisements, pages 7, 8 and 9.)
- Jenkins Machine Co. (Woodworking machinery), Sheboygan, Wis.
- Jenkins Mfg. Co. (Plumbing goods), 20 Vesey St., New York, N. Y.
- Jenne Acetylene Gas Machine Co. (Gas generators), Indianapolis, Ind.
- Jennings, C. E., & Co. (Saws, chisels, augers), 71-73 Murray St., New York, N. Y.
- Jennison Co., The (Radiator footrest), Fitchburg, Mass.
- Jensen's Factory Store (Closet tanks and seats), Evansville, Ind.
- Jerguson Gauge & Valve Co. (Engineering specialties), Winter Hill, 45 Somerville, Mass.
- Jerome-Edwards Metallic Packing Co. (Packing), 3136-38 W. Chicago Ave., Chicago, Ill.
- Jerome-Rothenschuler Valve Co. (Pump valves), 3136 W. Chicago Ave., Chicago.
- Jersey City Machine Co. (Lathe mandrels), 113-115 Plymouth St., Jersey City, N. J.
- Jessop, Wm., & Sons, Inc. (Tool steel), 91 John St., New York, N. Y.; Boston, Chicago, St. Louis, San Francisco.
- ♦ Jewell Belting Co. (Leather belting), Hartford, Conn.; Chicago, New York, N. Y.
- Jewell Mfg. Co. (Thermostats), 27 Clark St., Auburn, N. Y.
- Jewell Polar Co. (Water stills), 567 W. Van Buren St., Chicago.
- Jewell Water Improvement Co. (Water filters), 9 S. Clinton St., Chicago, Ill.
- Jiffy Fire Hose Rack Co., The (Hose racks, etc.), 133 W. 52nd St., New York, N. Y.
- Jiffy Water Heater Co. (Water heaters), 1000-02 N. Vandeventer Ave., St. Louis, Mo.
- ♦ Jobbers Mfg. Co. (Belt dressing), 327 S. LaSalle St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Johansson, C. E., Inc. (Gages), Poughkeepsie, N. Y.
- Johns-Manville, Inc. (Asbestos products), Madison Ave. and 41st St., New York, N. Y.; Milwaukee; Chicago; Boston; Philadelphia; Pittsburgh; Cleveland; St. Louis; Buffalo; Detroit; Baltimore; New Orleans; Kansas City; Minneapolis; San Francisco; Los Angeles; Seattle; Dallas; Indianapolis; Albany; Syracuse; Cincinnati; St. Paul; Memphis; Birmingham; Wilkes-Barre; Louisville; Duluth; Newark; Salt Lake City; Akron; Atlanta; Columbus, O.; Dayton; Denver; Omaha; Portland, Ore.; Rochester; Toledo; Washington; Youngstown; O.; Canton; Des Moines; El Paso; Grand Rapids; Great Falls; Houghton; Saginaw; Tacoma; Tulsa; Houston; Vancouver; Montreal; Winnipeg; Nashville; San Diego; Sacramento.
- Johns-Pratt Co., The (Sheet packings), Hartford, Conn.
- Johnson Acetylene Gas Co. (Acetylene gas generators), Crawfordsville, Ind.
- ♦ Johnson Belting Co. (Leather belting), 423 E. 56th St., New York; Gastonia, N. C.; Boston, Mass.; Cleveland, O.; Philadelphia, Pa.
- Johnson Bronze Co. (Pulley bushings), New Castle, Pa.; Detroit; Chicago; Pittsburgh; Cleveland; Flint; Atlanta, Minneapolis, New York, San Francisco.
- Johnson, Carlyle, Machine Co., The (Friction clutches, etc.), Manchester, Conn.
- Johnson Compound & Supply Co. (Boiler compound), Rochester, N. Y.
- Johnson Direct Jet Gas Appliance Co. (Gas burners), Cedar Rapids, Ia.
- Johnson Emergency Sprinkler Stop Co. (Sprinkler stops), 197-99 Eddy St., Providence, R. I.
- Johnson, E. J. (Roofing slate), 38 Park Row, New York, N. Y.
- Johnson, E. P., Rule Mfg. Co. (Rules and calipers), 565 W. Washington Blvd., Chicago, Ill.
- Johnson Gas Appliance Co. (Gas burners), Cedar Rapids, Ia.
- Johnson, Geo. T., Co. (Toilet paper holders), 400 S. Clinton St., Chicago, Ill.
- Johnson, I. H., Jr., Co., Inc. (Lathes), 337 N. 15th St., Philadelphia, Pa.
- Johnson, John, Co. (Filter presses), 37th St. and 2nd Ave., Brooklyn, N. Y.
- Johnson, Henry, Company, Inc., The, Gates Ave. and Boulevard, Jersey City, N. J.
- Johnson, J. D., Co., Inc. (Plumbing goods), 139-143 N. 7th St., Philadelphia, Pa.; 68 Charlton St., New York; Boerum Pl. and State St., Brooklyn; Newton Ave. and Division St., Camden, N. J.; 384 Jackson Ave., Long Island, N. Y.; Front and Fulton Sts., Newark, N. J.; 277-81 Water St., Bridgeport.
- Johnson Mfg. Co. (Soldering fluid), 729 Washington Blvd., Chicago, Ill.
- Johnson Mfg. Co. (Engineers' rollers), Urbana, O.
- Johnson, O. A., & Sons (Die stocks), 6522 S. Winchester Ave., Chicago, Ill.
- Johnson, Peter, & Sons, Inc. (Pumps), Decorah, Ia.
- Johnson Service Company (Thermostats, humidifiers, etc.), 149 Michigan St., Milwaukee, Wis.; Boston; New York; Philadelphia; Pittsburgh; Cleveland; Cincinnati; Detroit; Buffalo; Chicago; Minneapolis; St. Louis; Kansas City; Denver; San Francisco; Seattle.
- Johnson, S. T., Co. (Fuel oil burners), 1337 Mission St., San Francisco, Cal.; 945 Grace Ave., Oakland, Cal.
- Johnson Tool Co., Inc. (Sprinkler tops), 201 Eddy St., Providence, R. I.
- Johnson, W. H., & Son Co. (Sleeves and shields), 330 E. St. Joe, Indianapolis, Ind.
- Johnson & Biddle Tool Co. (Filing machines), Elkhart, Ind.
- Johnson & Johnson (First aid cabinets), New Brunswick, N. J.
- Johnson & Miller (Test indicators), 42 Murray St., New York City.

Johnson-Washburn Co. (Heating boilers), 87-93 Haverhill St., Boston, Mass.  
 Johnson, Wm., Firm of (Plumbers' tools), Brenner and Kent Sts., Newark, N. J.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Johnston & Chapman Co. (Coal and coke screens), 2925 Carroll Ave., Chicago, Ill.  
 Johnston Optical Co. (Industrial goggles), 314 State St., Detroit, Mich.; Grand Rapids, Mich.; Saginaw, Mich.  
 Johnston & Jennings Co., The (Mach'y), Addison Rd. and L. S. & M. St., Cleveland, O.  
 Johnston-Morehouse-Dickey Co. (Brattice cloth), 106 Market St., Pittsburgh, Pa.  
 Johnston, Wm. T., Co. (Pipe threading tools), 3d and Vine Sts., Cincinnati, O.  
 Joliet Textile Mills, Inc. (Cotton waste), Joliet, Ill.  
 Joliet Wrought Washer Co. (Washers), Joliet, Ill.  
 Jones, MacNeal & Camp, Inc. (Electric drills), 522 S. Clinton St., Chicago; 413 E. Larned St., Detroit; 206 Broadway, New York.  
 Jones, S. M., Co., The (Oil well supplies), Toledo, O.  
 ♦ Jones, W. A., Foundry & Machine Co. (Cast iron pulleys, etc.), 4426 Roosevelt Road, Chicago, Ill.; 20 Murray St., New York, N. Y.; Union Arcade, Pittsburgh.  
 ♦ Jones & Laughlin Steel Co. (Power transmission mach'y, etc.), Vandergrift Bldg., Pittsburgh, Pa.  
 Jones, Harry H. (Belt fasteners), Lancaster, N. H.  
 Jones Hollow Ware Co. (Plumbing supplies), N. E. Cor. Forrest & Madison Sts., Baltimore, Md.  
 Jones & Lamson Machine Co. (Lathes), Springfield, Vt.  
 Jones Mfg. Co. (Water filters), 243 Franklin St., Boston, Mass.  
 Jones Packing Co. (Steam packings), 50 Church St., New York.  
 Jones Strainer Mfg. Co. (Well strainers), Lexington, Tenn.  
 Jones Superior Machine Co. (Woodworking mach'y), 1258-72 W. North Ave., Chicago, Ill.  
 Jordan Bros., Inc. (Hoists), 74 Beekman St., New York, N. Y.  
 Jordan & Steele Mfg. Co., The (Sink brackets), Charlotte, Mich.  
 Jordan, Paul R., & Co. (Ventilators), 1131 Hume-Mansur Bldg., Indianapolis, Ind.  
 Josam Mfg. Co. (Floor and trap drains), Michigan City, Ind.; 207 E. 43rd St., New York, N. Y.; Insurance Exchange Bldg., Chicago, Ill.  
 Jost's, Edmund, Sons (Indicators), 56-60 Third St., Newark, N. J.  
 Joubert & Goslin Mach. & Foundry Co. (Tank and machinery), P. O. D. 930 Birmingham, Ala.; Box 1393 New Orleans, 23 Beaver St., New York.  
 Joyce-Cridland Co., The (Jacks), Dayton, O.  
 Joyce-Koebel Company, Inc., The (Industrial diamonds), 39 W. 32d St., New York, N. Y.  
 Judd & Leland Mfg. Co. (Packing, etc.), Clifton Springs, N. Y.  
 Judson Governor Co., The (Governors, cocks, etc.), Rochester, N. Y.  
 Judson Mfg. Co. (Structural iron and steel), 819 Folsom St., San Francisco, Cal.  
 Jumbo Heater & Mfg. Co., The (Water heaters), 6811 Superior Ave., Cleveland, O.  
 Jumbo Mfg. Co. (Pipe tongs), 421 Wood St., Pittsburgh, Pa.  
 Jurack, Chas., Co., The, Milwaukee, Wis.  
 Justice, Philip S., & Co. (Jacks, etc.), 421 Chestnut St., Philadelphia, Pa.  
 Justrite Mfg. Co., The (Oil and waste cans, miners' lamps, etc.), 2052-2082 Southport Ave., Chicago, Ill.

## K

K.-B. Pulverizer Co., Inc. (Pulverizing machinery), 92 Lafayette St., New York City.  
 K. E. K. Mfg. Co., Inc. (Boiler compound), 112-16 Pearl St., Syracuse, N. Y.  
 K.-G. Welding & Cutting Co., Inc., (Welding outfits), 556 W. 34th St., New York, N. Y.; 929 Chestnut St., Philadelphia; 104 Wood St., Pittsburgh.  
 K. M. Mfg. Co. (Grease cups), Factories Bldg., Toledo, Ohio.  
 Kaetker Saw Machine Co. (Saw machinery), 4600 Spring Grove Ave., Cincinnati, O.  
 Kahlenberg Bros. Co. (Gas engines), Two Rivers, Wis.  
 Kalamazoo Fdy. & Machine Co. (Trenching braces), 578 E. Main St., Kalamazoo, Mich.  
 Kalamazoo Gasoline Engine Works (Gas engines), Kalamazoo, Mich.  
 Kalamazoo Pump Co. (Water supply outfits), Kalamazoo, Mich.  
 Kalamazoo Railway Supply Co. (Railroad tools and supplies), Kalamazoo, Mich.  
 Kalamazoo Sanitary Mfg. Co., Kalamazoo, Mich.  
 Kalamazoo Steel Goods Co. (Shop furniture), Kalamazoo, Mich.  
 Kales Stamping Co. (Washers), 1657 West LaFayette Blvd., Detroit, Mich.  
 Kales-Haskel Co. (Ball bearing race), Detroit, Mich.  
 Kaltenthaler, H. J. (Pipe and fittings), 234 Cherry St., Philadelphia, Pa.; 120 Liberty St., New York.

Kanawha Mfg. Co. (Hot water heating boilers), Charleston, W. Va.  
 Kane, Wm., Mfg. Co. (Steam generator, etc.), 1909-15 Adams St., Philadelphia, Pa.  
 Kane & Roach (Machine shears), Niagara and Shonard Sts., Syracuse, N. Y.  
 Kansas City Bolt & Nut Co. (Screw machine products), Sheffield Station, Kansas City, Mo.  
 Kansas City Radiator Co., The (Steam and hot water radiators), 31st St., Kansas City, Mo.  
 Kansas City Rubber & Belting Co. (Mechanical rubber goods), 717 Delaware St., Kansas City, Mo.  
 Kansas City Spiral Pipe Co. (Spiral steel pipe), 416 Dwight Bldg., Kansas City, Mo.  
 Karas Electric Co. (Blow torches), 215-217 W. Illinois St., Chicago.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Karge System, Inc. (Shaft couplings), Phoenix, N. Y.  
 Karry-Lode Industrial Truck Co., Inc. (Industrial trucks), 100 Nott Ave., Long Island City, N. Y.  
 Kasent Co. (Case hardening compounds), 11 Water St., New York, N. Y.  
 Kasper Stamp & Seal Co. (Steel stamps), 1103 Locust St., St. Louis, Mo.  
 Katzenstein, L., & Co. (Metallic packing), 358 West St., New York, N. Y.  
 Katzinger, Edward, Co. (Gas and oil burning furnaces), 123 N. Sangamon St., Chicago, Ill.  
 Kaufman, A. G., Mfg. Co., The (Torches, lamps, etc.), 543 Broadway, New York, N. Y.  
 Kaukauna Machine Works (Power hammers), Kaukauna, Wis.  
 Kaustine Co., Inc. (Dry closets), Buffalo, N. Y.; Boston, Chicago, Lansing, Mich.; New York, Philadelphia, Toronto.  
 Kawalle Automatic Mitre Box Co. (Mitre boxes), 504 N. 9th St., Manitowoc, Wis.  
 Kayline Company (Lighting fixtures), 600 Huron road, Cleveland, O.  
 Kayser Tanning Co. (Lace leather), 3914 N. Broadway, St. Louis, Mo.  
 Kearney & Trecker Corporation (Milling machines), West Allis, Milwaukee, Wis.; Cleveland, Chicago, New York.  
 Keasbey & Mattison Co. (Asbestos products), Ambler, Pa.; 186 Purchase St., Boston; 111 14th St., Washington; 100 John St., New York City; 1390 W. 9th St., Cleveland; 505 Candler Bldg., Atlanta, Ga.; 350 E. Water St., Milwaukee; 214 S. Peters St., New Orleans; 309 S. 6th St., Minneapolis; 215-217 Chestnut St., St. Louis; 209 Third Ave., Pittsburgh; 222 Lake St., Chicago; 528 W. Main St., Cincinnati; 1113 Harney St., Omaha; 1 S. 20th St., Birmingham, Ala.  
 Keating, E. F., Co. (Gauge glasses), 446 Water St., New York, N. Y.  
 Keckley, O. C., Co. (Hose, belting and packing), 318 W. Washington St., Chicago, Ill.  
 Keeler, E., Co. (Boilers, tanks, etc.), 238 West St., Williamsport, Pa.; New York; Philadelphia; Pittsburgh; Chicago; Boston.  
 Keeley, J. J., Boiler Works (Boilers), Jackson, Mich.  
 Keenan Structural Slate Co. (Structural slate), Bangor, Pa.  
 Keene, George C., & Co. (Flanging machines), 2327 Florence Ave., Cincinnati, O.  
 Kees, F. D., Mfg. Co. (Damper regulators), Beatrice, Neb.  
 Kell, Hock & Co., Inc. (Index centers), 354 Mulberry St., Newark, N. J.  
 Keller Mechanical Engraving Co. (Die sinkers), 70 Washington St., Brooklyn, N. Y.  
 Keller Pneumatic Tool Co. (Pneumatic tools), Grand Haven, Mich.; 20 E. Jackson Blvd., Chicago.  
 Kellogg, M. W., Co., The (Welded pipe fittings, etc.), 90 West St., New York, N. Y.  
 Kellogg Mfg. Co. (Air pumps), E. Main and Circle Sts., Rochester, N. Y.; 1733 Broadway, New York; 1113 S. Michigan Ave., Chicago; 444 Market St., San Francisco; 2113 Dime Bank Bldg., Detroit.  
 Kellogg, Spencer & Sons, Inc. (Core oils), Niagara Sq., Buffalo, N. Y.  
 Kelly Axe Mfg. Co. (Axes), Charleston, W. Va.  
 Kelly Brass Works (Radiator valves), 226 W. Ontario St., Chicago, Ill.  
 Kelly Controller Co. (Boiler controllers), 15 E. Van Buren St., Chicago, Ill.  
 Kelly Electric Machine Co. (Woodworking mach'y), 111-19 Dearborn St., Buffalo, N. Y.  
 Kelly Foundry & Machine Co. (Boiler castings, grates, etc.), 9th and Pearl Sts., Goshen, Ind.  
 Kelly Graphite Mills, The (Graphite), 534 W. 22d St., New York, N. Y.; Chicago, Hamilton, O.; Philadelphia, Pa.  
 San Francisco; 1008 Sycamore St., Cincinnati; New Orleans.  
 Kelly Mfg. Co., The (Water supply systems), Bucyrus, O.  
 Kelly, R. A., Co., The (Metal shapers), Xenia, O.; 406 Magazine St., New Orleans, La.  
 Kelly Reamer Co., The (Reamers and boring tools), 3705 West 73rd St., Cleveland, O.  
 Kelly, Thos., & Bros. (Water closet combinations), S. Kolmar Ave. and 46th St., Chicago, Ill.

- ◆ **Kelly & Jones Co.** (The (Plumbing and steamfitting specialties), Greensburg, Pa.; 13-21 Park Row, New York; 136-137 Water Ave., Pittsburgh; 156 N. Clark St., Chicago; 41 De Menil Bldg., St. Louis; 412 Mack Bldg., Denver; 401 Atlas Bldg., Kelsey Heating Co. (Heating furnaces), Syracuse. Kemoshyne Products, Inc. (Polishes and cleaners), Camden, N. J.
- Kemp, C. M., Mfg. Co.**, 405-413 E. Oliver St., Baltimore, Md.
- Kempe, H. F., & Co.** (Belt lacing), 565 Washington Blvd., Chicago, Ill.
- Kempsmith Mfg. Co.**, The (Milling machines), 45th and Rogers Sts., Milwaukee, Wis.
- Kendallville Broom & Brush Co.** (Brooms and brushes), Kendallville, Ind.
- Kendrick Valve & Washer Co.** (Washers, cups, etc.), 316 E. Water St., Syracuse, N. Y.
- Kenehan Steel Belt Fastener Co.**, The (Belt fasteners), 160 N. Wells St., Chicago, Ill.
- Kennebunk Mfg. Co.** (Fibre boxes and cases), Milton, N. H.
- Kennedy, J. E.** (Force pumps), 30 E. 42d St., New York, N. Y.; 803 Callowhill St., Philadelphia.
- Kennedy, J. W.** (Closet overflow), 214 E. Front St., Missoula, Mont.
- ◆ **Kennedy Valve Mfg. Co.** (Valves and hydrants), Elmira, N. Y.; 95 John St., New York; 204-8 N. Jefferson St., Chicago, Ill.; 47 India St., Boston; 23-25 Minna St., San Francisco, Calif.  
(See index to advertisement, pages 7, 8 and 9.)
- Kennedy-Van Saun Mfg. & Eng. Co.** (Crushing, mine and cement machinery), 120 Broadway, New York; 139 Townsend St., San Francisco, Calif.
- Kennesaw Marble Co.**, The (Plumbers' marble), Marietta, Ga.
- Kennicott Water Softener Co.** (Water filters and softeners), Chicago Heights, Ill.; 208 S. LaSalle St., Chicago.
- F. C. Kent Co.** (Bent tube specialties), 65-71 Grace St., Irvington, N. J.
- Kent Machine Co.** (Keg trucks), Kent, O.
- Kent Mfg. Co.** (Woodworking machinery), Faribault, Minn.
- Kent Mill Co.** (Crushing machines), 10 Rapelyea St., Brooklyn, N. Y.
- Kenway, F. N.** (Pipe hangers), 248 Boylston St., Boston, Mass.
- Kermath Mfg. Co.** (Engines), 5880 Commonwealth, Detroit, Mich.; 153 W. 15th St., New York, N. Y.
- Kern, O.** (Mill picks), Fleetwood, Pa.
- Kerchen Co.** (Ventilators), McCormick Bldg., Chicago, Ill.; 1265 Broadway, New York.
- Kerner Incinerator Co.**, The (Garbage burners), 596 Clinton St., Milwaukee, Wis. Branches in all principal cities.
- Kerr & Co., Inc.** (Belt lacing), 116 Liberty St., New York, N. Y.
- Kerr Machinery Corp.** (Centrifugal pumps), 642 Beaubien St., Detroit, Mich.
- Kerr Turbine Co.** (Steam turbines), Wellsville, N. Y.
- Kerrhard Company**, The (Mach'y), Red Oak, Ia.
- Kessler Wheelbarrow Co.**, 1314 Germantown St., Philadelphia, Pa.
- Keuffel & Esser Co.** (Surveyors' instruments), Hoboken, N. J.; Chicago, St. Louis, San Francisco, New York and Montreal.
- Kewanee Boiler Co.** (Boilers, etc.), Kewanee, Ill.; 328 W. Washington St., Chicago; 12th and Olive Sts., St. Louis; 47 W. 42d St., New York; 206 R. A. Long Bldg., Kansas City; 209 Scott Bldg., Salt Lake City; Los Angeles.
- Kewanee Private Utilities Co.** (Gas engines, domestic waterworks, etc.), Kewanee, Ill.; 50 Church St., New York; 1212 Marquette Bldg., Chicago.
- Key-Roof Flash & Vent Fitting Co.** (Roof flanges), 1809 14th St., N. W., Washington, D. C.
- Keys Piston Ring Co.** (Packing), 3047-49-51 Olive St., St. Louis, Mo.
- Keystone Boiler & Foundry Co.** (Radiators, boilers, etc.), Landlerville, Pa.
- Keystone Brass Works** (Mercury gauges), 926 West 12th St., Erie, Pa.
- Keystone Chemical Co.** (Boiler compound, water filters, etc.), 2222 N. Marshall St., Philadelphia, Pa.; Chicago; San Francisco.
- Keystone Driller Co.** (Pumps, drills, etc.), Beaver Falls, Pa.; 170 Broadway, New York; Monadnock Bldg., Chicago; Joplin, Mo.  
(See index to advertisement, pages 7, 8 and 9.)
- Keystone Emery Mills** (Emery powder and cake), 4329 Paul St., Philadelphia, Pa.
- Keystone Grinders & Mfg. Co.** (Tool grinders), Pittsburgh, Pa.
- Keystone Lubricating Co.** (Lubricating grease and oils), 21st and Clearfield Sts., Philadelphia, Pa.; Boston, Chicago, Denver, New York, Pittsburgh, San Francisco, St. Louis.
- Keystone Mfg. Co.**, The (Wrenches and drills), 41-51 Chandler St., Buffalo, N. Y.; New York; Chicago.
- Keystone National Powder Co.** (Blasting powder), Emporium, Pa.
- Keystone Oil & Mfg. Co.** (Oils and greases), 111 N. Market St., Chicago, Ill.
- Keystone Pottery Co.** (Sanitary earthenware), Trenton, N. J.
- Keystone Pulley Co.** (Power transmission mach'y), Oneida, N. Y.; New York; Chicago; Boston; Atlanta.
- Keystone Reamer & Tool Co.** (Small tools), Millersburg, Pa.; 30 Warren St., New York; 180 N. Market St., Chicago, Ill.
- Keystone Steel & Wire Co.** (Wire and wire products), Peoria, Ill.
- Keystone Stoker Co.** (Stokers), 30 Church St., New York; 141 Milk St., Boston, Mass.
- ◆ **Kidd Drawn Steel Co.** (Steel), Alliquippa, Pa.
- Kidde & Co.** (Factory equipment and gas heating appliances), 162 Chambers St., New York, N. Y.; Chicago.
- Kidder & Craig** (Steam engines and lead pipe couplings), Rumney Depot, N. H.
- Kidder, R. E., Co.** (Woodworking mach'y), 45 Herman St., Worcester, Mass.
- Kidder, J. F., Mfg. Co.** (Punches, shears, etc.), Burlington, Vt.
- Kidwell Boiler & Engineering Co.** (Water tube boilers), 288 E. Water St., Milwaukee, Wis.
- Kielely & Mueller, Inc.** (Steam specialties), 34 W. 13th St., New York, N. Y.; 223 W. Erie St., Chicago.
- Kiesler, Joseph F., Co.** (Clam-shell buckets), 934 Huron St., Chicago, Ill.
- Kilbourne & Jacobs Mfg. Co.**, The (Cars, carts, etc.), Head of Lincoln St., Columbus, O.
- Kilborn & Bishop Co.**, The (Drop forgings, chisels, wrenches, etc.), Chapel and Lloyd Sts., New Haven, Conn.
- Kilgour, D. F., Lubricator Co.**, The (Elevator lubricators), Lexington, Mass.
- Kimball Brothers Co.** (Elevators), 2000 9th St., Council Bluffs, Ia.
- Kimball, C. M.** (Metal polish), 41 Bowdin St., Winthrop, Mass.
- Kimble Electric Co.** (Fans, blowers, etc.), 648 N. Western Ave., Chicago, Ill.
- Kincaid Bros.** (Ejectors, etc.), 211 Water St., Pittsburgh, Pa.
- King, A. R., Mfg. Co.** (Ratchet drills), Kingston, N. Y.
- King Bros.** (Gasoline engines), East Water & Grape Sts., Syracuse, N. Y.
- King Co.**, The (Acetylene gas generators), Norwich, N. Y.
- King Construction Co.** (Radiator valves), 27 Kings Rd., North Tonawanda, N. Y.; New York; Philadelphia; Scranton; Boston.
- King, Julius, Optical Co.** (Eye protectors), 10 Malden Lane, New York, N. Y.
- King Light Co.** (Gas mach'y), Peoria, Ill.
- King Machine Tool Co.**, The (Machine tools), Winton Pl., Cincinnati, O.
- King Mfg. Co.** (Radiator brushes), 263 Sussex Ave., Newark, N. J.
- Kingsford Foundry & Machine Co.** (Pumps and boilers), Oswego, N. Y.
- Kingsley Mfg. Co.** (Pulley covering), 213 E. Ohio St., Indianapolis, Ind.
- Kinkead Mfg. Co.** (Apparatus for leveling shafting), 45 High St., Boston, Mass.
- Kinnard & Sons Mfg. Co.** (Gasoline engines), Minneapolis, Minn.
- Kinney Mfg. Co.** (Pumps and friction clutches, 3529-3541 Washington St., Jamaica Plain St., Boston, Mass.; 30 Church St., New York, N. Y.; 1303 Manhattan Bldg., Chicago, Ill.; 505 Underwood Bldg., San Francisco, Cal.; 725 Commercial Trust Bldg., Philadelphia, Pa.; Kansas City, Houston.  
(See index to advertisements, pages 7, 8 and 9.)
- Kinsey & Mahler Co.** (Valves, cocks, etc.), 400 S. Adams St., Peoria, Ill.
- Kinslev Mfg. Co.** (Steam whistles), Bridgeport, Conn.
- Kirschberger M. & Co., Inc.** (Acetylene burners), 14th Ave. and 37th St., Brooklyn, N. Y.
- Kirk & Blum Mfg. Co.** (Radiator shields, blowers, etc.), 2846-2852 Spring Grove Ave., Cincinnati, O.
- ◆ **Kirk-Latty Mfg. Co.**, The, 1971 W. 85th St., Cleveland, O.
- Kirk, W. P.** (Surface gauges), 336 W. 4th St., Cincinnati, O.
- Kirkup, Robert, & Co.** (Plumbing brass goods), 616-618 Lodge St., Cincinnati, O.
- Kirstin, A. J., Co.** (Stump pullers), Kirstin Bldg., Escanaba, Mich.; Atlanta, Portland, Sault Ste. Marie, Can.
- Kitson Hydro-Carbon Heating & Incandescent Lighting Co.** (Plumbing brass goods), 2819 Oakford St., Philadelphia, Pa.
- Kitts Mfg. Co.** (Steam specialties), 19-21 W. Seneca St., Oswego, N. Y.; Jenkins Arcade, Pittsburgh, Pa.; 233 Broadway, New York, N. Y.
- Kitts Steam Specialty Co.** (Steam traps), 56 East 2nd St., Oswego, N. Y.
- Klaxon Company** (Signal horns), Newark, N. J.
- Klein, Mathias & Son** (Linemen's tools), 3200 Belmont Ave., Chicago, Ill.
- Klein Mfg. Co.** (Paints), 616 Ulmer Bldg., Cleveland, O.
- Klein-Logan Co.**, The (Picks, tools, hammers and sledges), S. 13th and Breed Sts., Pittsburgh, Pa.



Kleinert, I. B., Rubber Co. (Rubber bath curtains), 725 Broadway, New York, N. Y.  
 Kleinman, Russell F. (Pipe couplings), 940-44 N. Front St., Philadelphia, Pa.  
 Klemm & Co. (Water filters), 1364 W. Grand Ave., Chicago, Ill.  
 Klemm, E. R. (Stone jacks), 1445-55 W. Austin Ave., Chicago, Ill.  
 Kline, Lewis T. (Excelsior cutting machines), Alpena, Mich.  
 Klinger-Dills Co., The (Endless belts), 129 N. Jefferson St., Dayton, O.  
 Klipfel Mfg. Co. (Pressure regulators, thermostats, etc.), 2651-59 W. Harrison St., Chicago, Ill.  
 Klotz Machine Co. (Pumps and mach'y), Sandusky, O.  
 Knapp, Arthur, Engineering Corp. (Thread inspection apparatus), 101 Park Ave., New York, N. Y.  
 Knapp Mfg. & Supply Co. (Plumbers' tools, oilers, etc.), 241 Water St., New York, N. Y.  
 Knauel Tool Works (Calipers and clamps), Rock Island, Ill.  
 Knickerbocker Mfg. Co. (Bath sprays), 972 Montana St., Chicago.  
 Knickerbocker Co., The (Dust collectors), Jackson, Mich.  
 Knickerbocker Valve Co. (Heat controlling valves), 55 Phelps St., Oneida, N. Y.  
 Knight Engineering & Sales Co. (Electric drills), 30 W. Walton Pl., Chicago; 210 W. 7th St., Los Angeles.  
 Knight, H. W., & Son (Pattern letters and figures), Seneca Falls, N. Y.  
 Knight Light & Soda Fountain Co. (Gasoline lighting systems), 2701 N. Kildare Ave., Chicago, Ill.  
 Knight, W. B., Machinery Co. (Drilling and milling machines), 3920 W. Pine Blvd., St. Louis, Mo.  
 Knight Mfg. Co., The (Sawmill and well drilling mach'y), Canton, O.  
 Knight & Thomas, Inc. (Fire extinguishers), 212 Summer St., Boston, Mass.; 80 Read St., New York.  
 Knobbe Filter Co., The (Water filters), 359 N. State St., Chicago, Ill.  
 Knott, L. E., Apparatus Co. (Drinking fountains), Ames and Amherst Sts., Cambridge, Mass.; 70 5th Ave., New York.  
 Knott Mfg. Co. (Plumbing woodwork, etc.), Tell City, Ind.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Knowles Mushroom Ventilator Co. (Ventilators), 202 Franklin St., New York, N. Y.  
 Knowlton Rubber Co., Geo. W. (Packing), 45 High St., Boston, Mass.  
 Knox Mfg. Co., Inc. (Couplings, clamps, etc.), 19 N. 7th St., Philadelphia, Pa.  
 Koalsave Vacuum Valve Co. (Vacuum valves), 101 Park Ave., New York, N. Y.  
 Koch, Henry, & Sons (Machinists' tools), Nyack, N. Y.  
 Koch, Paul W., & Co. (Hole cutters), 19 S. Wells St., Chicago, Ill.  
 Koehler Mfg. Co. (Miners' lamps), Marlboro, Mass.  
 Koehring Company (Concrete mixers), Milwaukee.  
 Koenke Bros. Co. (Flush tank levers), Wildwood, N. J.  
 Kohler, F. E., & Co. (Shovels and scoops), Canton, O.  
 Kohler Co. (Enameled plumbing ware and Kohler automatic power and light, 110 volt, D. C.), Kohler, Wis.; Chicago, New York, San Francisco, Boston, St. Louis, Houston, Pittsburgh, Detroit, Indianapolis, Philadelphia, Seattle, Kansas City, Minneapolis, Norfolk, Omaha.  
 Kokomo Brass Works (Brass castings), Kokomo, Ind.  
 Kokomo Sanitary Pottery Co. (Sanitary earthenware), Box 14, Kokomo, Ind.  
 Kolesch & Co. (Draughtsmen's and engineers' instruments), 138 Fulton St., New York, N. Y.  
 Kompak Co. (Water heaters), New Brunswick, N. J.  
 Konigslow, E., Stamping & Tool Works (Metal stamping, presses and dies, etc.), 323 Champlain Ave., N.W., Cleveland, O.  
 Koppel Industrial Car & Equipment Co. (Mine equipment), Koppel, Pa.; New York, Pittsburgh, Chicago, San Francisco, Detroit, Philadelphia.  
 Koppers Co., The (Coke ovens), Union Arcade Bldg., Pittsburgh, Pa.  
 Korpff Mfg. Co. (Adjusting sink frames), North Center St., Lansing, Mich.  
 Kotten Machine Co. (Pneumatic tools), 57 Academy St., Jersey City, N. J.  
 Koven, L. O., & Brother, 154 Ogden Ave., Jersey City, N. J.; 50 Cliff St., New York.  
 Kraeuter & Co., Inc. (Wrenches and tools), 583 18th Ave., Newark, N. J.  
 Krahn Mfg. Co. (Lubricators), 598 Clinton St., Milwaukee, Wis.  
 Kramer Bros. Foundry Co., The (Sewer castings, etc.), Dayton, O.  
 Kramer, W. J., Oil Co. (Boiler compounds), 214-216 Reed St., Milwaukee, Wis.  
 Kramig, R. E., & Co. (Pipe and boiler covering), 8th St. and Eggleston Ave., Cincinnati, O.; Dayton, O.; Indianapolis, Ind.  
 Krause, A. E. (Feed water filters), Mountain Lakes, N. J.

Krein Chain Co. (Acetylene gas generators, etc.), Wapakoneta, O.  
 Krembs & Co. (Brazing compounds), 173 North Green St., Chicago, Ill.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Kremer-Cummins Machine Co., The (Belt shifters), 1833-35 East 55th St., Cleveland, O.  
 Kretschmer Mfg. Co. (Plumbing specialties), 9th and Washington Sts., Dubuque, Ia.  
 Kroeschell Bros. Co. (Wrenches, etc.), 440 W. Erie St., Chicago, Ill.  
 Kroeschell Bros. Ice Machine Co. (Ice and refrigerating mach'y), 472 W. Erie St., Chicago, Ill.  
 Krogh Pump & Machinery Co. (Pumps and ejectors), 159 Beale St., San Francisco, Cal.  
 Kruecke Bros. Mfg. Co. (Brass and bronze castings, beer pumps), 515 Park St., Milwaukee, Wis.  
 Kruger & Blind Co. (Pumps and vises), 513 Master St., Philadelphia, Pa.  
 Krupp Foundry Co., Ltd. (Pipe and fittings), Lansdale, Pa.  
 Kuhns Bros. (Iron pipe fittings), Dayton, O.  
 Kunkle Valve Co. (Pop safety valves, etc.), 825 Barr St., Fort Wayne, Ind.  
 Kupferle Bros. Mfg. Co. (Ammonia condensers), 600-602 N. Second St., St. Louis, Mo.  
 Kupferle, John C., Foundry Co. (Hydrants and iron fittings), First and Wright Sts., St. Louis, Mo.  
 (See index to advertisement, pages 7, 8 and 9.)

## L.

L. B. Brass Co. (Ball cocks), 12 Foster St., Peabody, Mass.  
 L. & D. Motor Works (Marine motors), 75 Prospect Ave., Hartford, Conn.  
 L. & L. Manufacturing Co., Inc. (Wrenches and special tools), High St., cor. 8th Ave., Newark, N. J.  
 ♦ La Belle Iron Works (Wrought iron pipe), Steubenville, O.; 257 Broadway, New York, N. Y.; 39 Cortlandt St., New York, N. Y.; John Hancock Bldg., Boston, Mass.; Land Title Bldg., Philadelphia, Pa.; Oliver Building, Pittsburgh, Pa.; Peoples Gas Bldg., Chicago, Ill.; Security Bldg., Kansas City, Mo.; Canal Bank Annex, New Orleans, La.; Mills Building, El Paso, Tex.; Rialto Bldg., San Francisco, Cal.; Healey Bldg., Atlanta, Ga.; Book Bldg., Detroit; L. C. Smith Bldg., Seattle.  
 Lackawanna Steel Co. (Iron and steel plates), Lackawanna, N. Y.; Boston; Chicago; Cleveland; New York; Philadelphia; St. Louis; San Francisco; Detroit; Buffalo; Cincinnati.  
 Lacke Electric Mfg. Co., The (Heat regulators), 8209 Blackstone Ave., Chicago, Ill.  
 Laclede-Christy Clay Products Co. (Mechanical stockers, brick, tile, etc.), 1673 Railway Exchange Bldg., St. Louis; 1366 Peoples Gas Bldg., Chicago, Ill.; 901 Oliver St., Pittsburgh, Pa.; 835 Book Bldg., Detroit; 50 East 42nd St., New York.  
 Laclede Steel Co. (Iron and steel bars), St. Louis, Mo.; 208 S. LaSalle St., Chicago.  
 Ladd, George T., Co., The (Boilers, water tube), 1606 First Nat'l Bank Bldg., Pittsburgh, Pa.; 528 McCormick Bldg., Chicago.  
 ♦ Ladew, Edward R., Co., Inc. (Leather belting, etc.), Glen Cove, N. Y.; 82 Fulton St., New York; 32 So. Jefferson St., Chicago; Pittsburgh, Philadelphia; Boston; Charlotte; Newark; Providence; Detroit; Cleveland.  
 LaFavorite Rubber Co. (Rubber goods), Hawthorne, Paterson, N. J.  
 LaFayette Engineering Co. (Portable cranes), 208 So. 4th St., LaFayette, Ind.  
 Lagerholm, E., Co., Inc. (Cutters and reamers), 9 S. Clinton St., Chicago, Ill.  
 Lagonda Mfg. Co. (Steam specialties), Springfield, O.; New York; Philadelphia; Pittsburgh; Chicago; Boston; Cincinnati; Cleveland; Detroit; Kansas City; St. Louis; Syracuse.  
 Laitner, A. & Sons (Bench brushes), 1442 Brush, Detroit, Mich.  
 Lake Erie Boiler Compound Co. (Boiler compound), 972 Rockefeller Bldg., Cleveland, O.  
 Lake Erie Mfg. Co., Inc. (Boiler compound, etc.), 198 Chicago St., Buffalo, N. Y.; 823-5 Rockefeller Bldg., Cleveland, O.  
 ♦ Lake Erie Bolt & Nut Co. (Bolts, screws and nuts), 915 E. 63d St., Cleveland, O.  
 Lake Shore Engine Works (Mach'y, etc.), Marquette, Mich.  
 Lakeside Forge Co. (Drop forgings, wrenches, etc.), Erie, Pa.  
 Lakewood Engineering Co. (Industrial cars), Bera Road, W. Cleveland, O.; Lumber Exchange Bldg., Chicago, Ill.; 1401 David Whitney Bldg., Detroit, Mich.; Milwaukee Athletic Club Bldg., Milwaukee, Wis.; 111 Broadway, New York, N. Y.; 1034 Widener Bldg., Philadelphia, Pa.; 411 Fulton Bldg., Pittsburgh, Pa.; 708 Colorado Bldg., Washington, D. C.  
 Lalanc & Grossjean Mfg. Co. (Melting ladles, etc.), 299 Broadway, New York, N. Y.; 19th and Clark St., Chicago.  
 Lalley Light Corp. (Lighting outfits), 3176 Bellvue Ave., Detroit, Mich.

- Lalor Fuel Oil System Co. (Oil burning equipment), 527 Colvin St., Baltimore, Md.
- Lambert Hoisting Engine Co. (Hoisting engines, etc.), 115 Pointier St., Newark, N. J.; 30 Church St., New York; 415 S. Dearborn St., Chicago.
- Lambert Machine & Engineering Co. (Boring machines), Cleveland, O.
- Lambertville Pottery Co. (Lavatories, etc.), Lambertville, N. J.
- Lambeth Rope Corp. (Transmission rope, rope dressing, etc.), New Bedford, Mass.
- Laminated Shim Co., Inc. (Brass shim), 14th St. and Governor Pl., Long Island City, N. Y.
- Lammert & Mann Co. (Pumps, etc.), 215 N. Wood St., Chicago, Ill.
- Lamprey Co., The (Boiler arches), Westfield, Mass.
- Lamson Co., The (Conveying apparatus), Boston, Mass.
- Lamson Cutter Head Co. (Woodworking cutting heads), 30 N. Jefferson St., Chicago, Ill.
- ♦ Lamson & Sessions Co., The (Bolts, rivets, etc.), 2188 Scranton Road, S. W., Cleveland, O.; 34 N. Clinton St., Chicago; Ford Bldg., Detroit; 74 Murray St., New York.
- Lamy, A., & Son (Oil gas burners), 535 Livingston St., Elizabeth, N. J.
- Lancaster Iron Works, Inc. (Steel tanks, etc.), Hager and Water Sts., Lancaster, Pa.
- Lancaster Machine & Knife Works (Machine knives), Lancaster, N. Y.
- Landau, J. N. (Drilling machines), 239 W. 68th St., New York, N. Y.
- Landers, Frary & Clark (Cutlery and hardware), New Britain, Conn.
- Landis Machine Co. (Bolt and nut mach'y), Waynesboro, Pa.
- Landis Tool Co. (Grinders), Waynesboro, Pa.; 50 Church St., New York.
- Lane & Bodley Co., The (Steam engines and power transmission mach'y), Tennessee Ave. and Padack Rd., Bond Hill, Cincinnati, O.
- Lane Bros. Co. (Tackle blocks), Poughkeepsie, N. Y.
- Lane Mfg. Co. (Woodworking mach'y), Montpelier, Vt.
- Lane, W. T., & Bro. (Coal bags), Poughkeepsie, N. Y.
- Lang Chemical Co. (Boiler compound), 2539 Grand River Ave., Detroit, Mich.
- Langelier Mfg. Co. (Machines, etc.), Cranston, Providence, R. I.
- Lanning, Geo. W. (Leather belting), Trenton, N. J.
- Langman, E. B., Co. (Wrought iron washers), East Chicago, Ind.
- Lansing Co. (Factory trucks, wheelbarrows, etc.), Lansing, Mich.; 233 W. Randolph St., Chicago; Willow and N. American Sts., Philadelphia; 28 Van Dam St., New York; 1413 W. 10th St., Kansas City; 78 Cambridge St., Boston; 311 N. 3rd St., Minneapolis; 338 Brannan St., San Francisco; 45 Woodward Ave., Detroit.
- Lansing Motor & Pump Co. (Pumps and gas engines), 324-328 Hosmer St., S., Lansing, Mich.
- Lansing Stamping Co. (Grinding machines), Lansing, Mich.
- La-Plant-Choate Mfg. Co. (House movers' trucks), 3015 First Ave., Cedar Rapids, Ia.
- Lapointe, J. N., Co., The (Broaching machines), New London, Conn.; 19 Harper Ave., Detroit.
- Lapointe Machine Tool Co., The (Broaching machines), Hudson, Mass.
- La Porte Mat. & Mfg. Co. (Steel mats), La Porte, Ind.
- Lappan, James, Mfg. Co., The (Boilers, steel pipe, etc.), 20th and Pike Sts., Pittsburgh, Pa.
- Larco Wrench & Mfg. Co. (Wrenches), 7800 Woodlawn Ave., Chicago, Ill.
- Larkin & Co. (Oil and gas well packers), Butler, Pa.
- Larkin Mfg. Co. (Fire dept supplies), Dayton, O.
- Larkin Packer Co. (Oil and gas well packers), Bartlesville, Okla.
- LaSalle Tool Co. (Grinding machines), LaSalle, Ill.
- Lasure Friction Clutch Co., The (Friction clutch pulley), 108-114 5th St., Watertown, Wis.
- Latta-Martin Pump Co. (Steam pumps), Hickory, N. C.
- Lattner, P. M., Mfg. Co. (Steam generators, etc.), Cedar Rapids, Ia.
- Latrobe Tool Co. (Drills and reamers), Latrobe, Pa.
- Laurence Belting Co. (Leather belting), 111 Chambers St., New York, N. Y.
- Lausen-Lawton Co., The (Gas engines, etc.), De Pere, Wis.; Council Bluffs, Ia.; Somerville, N. J.; Jacksonville, Ill.
- Lauson, John, Mfg. Co. (Gas engines), New Holstein, Wis.
- Law Metallic Packing Co. (Metallic packing), 82 Webster St., Newark, N. J.
- Lawler Water Feed & Damper Regulator Co. (Regulators, steam traps, etc.), 55 W. Houston St., New York, N. Y.
- Lawrence Belting & Supply Co. (Leather belting), 319 Methuen St., Lawrence, Mass.
- Lawrence Machine Co. (Pumps and engines), 2 Wall St., Lawrence, Mass.
- Lawrence Pump & Engine Co. (Pumps), Lawrence, Mass.; New York; New Orleans.
- Lawrence Shot & Lead Co. (Lead pipe and bar lead), 28th and A Sts., Omaha, Neb.
- Lawrenceville Bronze Co. (Brass, bronze and copper castings), 611 Bessemer Bldg., Pittsburgh, Pa.
- Lawson Mfg. Co. (Heaters, burners, etc.), 300-304 Lexington Ave., Pittsburg, Pa.
- Lawton, C. A., Co., The (Cast iron pulleys), De Pere, Wis.
- Lawton, W. M. (Leather belting), 6-10 Devereaux St., Utica, N. Y.
- ♦ Lay, Joseph Co., The (Brushes and brooms), Ridgely, Ind.; Mattoon, Ill.
- Layne & Bowler Co. (Irrigation pumps), Memphis, Tenn.; Houston, Tex.; Los Angeles, Chicago, Kansas City, Joplin.
- Lazier Gas Engine Co. (Gas engines), 190 Main St., Buffalo, N. Y.
- Lazarus Mfg. Co., The (Fire extinguishers), 224 High Ave., Cleveland, O.
- Lea-Courtenay Co. (Inc.) (Turbine pumps), 5 Main St., Newark, N. J.
- Lead Lined Iron Pipe Co., Wakefield, Mass.
- Leader Iron Works (Gas engines, domestic waterworks, etc.), Decatur, Ill.; 103 Park Ave., New York; 327 S. LaSalle St., Chicago.
- Leader Trahern Products Co. (Pumps), Rockford, Ill.; 327 S. La Salle St., Chicago; Decatur; 21 E. 40th St., New York; L. C. Smith Bldg., Seattle.
- Leader & Wasley Co., Inc., The (Envelope machinery), Norwich, Conn.
- Leadite Co., Inc. (Pipe joint cement), Land Title Bldg., Philadelphia, Pa.
- Leak-Cure Metal Cement Co. (Pipe joint cement), 110 Fulton St., New York, N. Y.
- Leahy, John J., Electrical Supplies (High water alarms), 48 Dey St., New York, N. Y.
- Leahy Mfg. Co. (Oil burners), 8th and Alameda St., Los Angeles, Calif.
- Leard, Wm., Co. (Machine keys), New Brighton, Pa.
- Leather Parts Co. (Leather parts), Indianapolis, Ind.
- Leathercraft Co., The (Reconstructed belting), 1255 W. 4th St., Cleveland.
- Leavitt Machine Co. (Valve reseating machines, etc.), Orange, Mass.
- Lebanon Machine Co. (Auger bits), Lebanon, N. H.
- Lebanon Valley Iron & Steel Co. (Iron and steel bars, bolts, screws, etc.), Lebanon, Pa.
- Lebanon Valley Iron & Steel Co. (Iron and steel bars, bolts, screws, etc.), Lebanon, Pa.
- Lebedjeff Engineering & Sup. Co., 227 Fulton St., New York, N. Y.
- Le Blond, R. K., Machine Tool Co., The (Machine tools), cor. Madison and Edwards Rds., Cincinnati, O.
- Leclaire Cabinet Works (Plumbers' woodwork), Edwardsville, Ill.
- LeCount Tool Works, W. G., South Norwalk, Conn.
- Leddell Metals Co., Inc. (Bearing metals), 281 Borden Ave., Long Island City, N. Y.
- Leddys Plumbers Soil Mfg. Co. (Plumbers' soil), Hoboken, N. J.
- Lee, Ernest, The (Blowers, cleaners), 115 S. Dearborn St., Chicago, Ill.
- Lee, Frank H., Co., The (Metal planers), Danbury, Conn.
- Lee, Thomas, & Son, Co. (Dust collectors and ventilators), 128 W. 2d St., Cincinnati, O.
- Leeds & Northrup Co. (Furnace recorder), 4901 Stenton Ave., Philadelphia, Pa.; 1304 Monadnock Block, Chicago, Ill.
- Lees-Bradner Co., The (Machine tools), 6210 Carnegie Ave., S.E., Cleveland, O.
- Leetonia Tool Co., The (Miners' tools), Leetonia, O.
- Leffel, James, & Co., The (Engines and boilers), 426 East St., Springfield, O.
- Leffler, Chas., & Co. (Metal working mach'y), 49-71 Clymer St., Brooklyn, N. Y.
- Lehman Bros. (Metals), 326-32 Jefferson St., Hoboken, N. J.
- Lehmann Machine Co. (Lathes), St. Louis, Mo.
- Lehnert & Co. (Shower baths, closet fittings, etc.), 334-36 East 23rd St., New York, N. Y.
- Lehon Co., The (Roofing paper), West 44th and S. Oakley, Chicago, Ill.
- Leidecker Tool Co. (Well drilling mach'y and tools), Marietta, O.; Bartlesville, Okla.; Basin, Wyo.; Casper, Wyo.
- Leighton, H. J. (Gas engines), Syracuse, N. Y.
- Leiman Bros. (Sand blast machines, blowers, etc.), 81 Walker St., New York; Newark, N. J.
- Leland-Gifford Co. (Grinding machines), Worcester, Mass.; New York; Detroit; Chicago; Rochester.
- Leng's, John S., Son & Co. (Syphon pumps), 33 Murray St., New York, N. Y.
- Lenher Engineering Co., (Mechanical stokers and hoisting engines), 95 Liberty, New York.
- Lenk Manufacturing Co., The (Soldier), Boston, Mass.
- Lenmar Mfg. Co. (Baling presses), Saginaw, Mich.
- Lennox Machine Co. (Gas engines, tapping machines, etc.), Marshalltown, Ia.; 16th and Rockwell Sts., Chicago, Ill.
- Leonhard Engraving Works (Letters and figures, steel), 2431 W. 14th St., Chicago, Ill.
- Leonhard, Frederick (Air exhausters), 536 E. 128d St., Cleveland, O.
- Leonard-Rooke Co. (Shower bath valves), 486 Broad St., Providence, R. I.



♦ Leschen, A., & Sons Rope Co. (Rope), 5909 Kennerly Ave., St. Louis, Mo.; 90 West St., New York; 1649 Wazee St., Denver; San Francisco.

Leslie Co., The (Damper regulators), Grant and Valley Brook Aves., Lyndhurst, N. J.

Leslie, Elliott & Co. (Power boilers), Paterson, N. J.

Lewellen Mfg. Co. (Variable speed transmissions), Columbus, Ind.

Lewin Metals Corp. (Bearing metals), St. Louis, Mo.

Lewis, John T. & Bros. Co. (Soldier, etc.), 1015-19 E. Fayette St., Baltimore, Md.

Lewis, Samuel (Closet augers, etc.), 73 Barclay, New York, N. Y.

Lewis-Shepard Co. (Elevating trucks), 566 E. First St., South Boston, Mass.

Lewis Steam Specialty & Valve Co. (Valves and regulators), 1533 Cherry St., Philadelphia, Pa.

Lewis Tool Mfg. Co. (Screwdrivers), Boston, Mass.

Lewistown Fdy. & Mach. Co. (Gravel plant mach'y), Lewiston, Pa.

Lewthwaite, George A., Co. (Presses, punches, dies), 116 Walker St., New York, N. Y.

Leyner, J. Geo., Engineering Works Co. (Mining mach'y and supplies), Littleton, Colo.; Birmingham, Ala.

L'Hommedieu, Chas. F. & Sons Co. (Plating supplies), 4521 Ogden Ave., Chicago, Ill.; 1302 Ontario St., Cleveland, O.

♦ Libbey Glass Mfg. Co. (Gauge glasses), Toledo, O.

Liberty Gasket & Mfg. Co. (Gaskets), 2901 S. 48th Ave., Chicago.

Liberty Iron Pipe & Nipple Works (Pipe and nipples), 138 Centre St., New York.

Liberty Machine Tool Co., The (Planers), Hamilton, Ohio.

Liberty Mfg. Co. (Boiler tube cleaners), Frick Bldg., Pittsburgh, Pa.; 332 S. Michigan Ave., Chicago.

Liberty & Nicholls Mfg. Co. (Gas tubing), East Norwalk, Conn.

Liddell Co. (Steam engines), 901 N. Church St., Charlotte, N. C.

Lidgerwood Mfg. Co. (Hoisting engines, etc.), 96 Liberty St., New York, N. Y.; Chicago, Detroit, Los Angeles, Pittsburgh, Cleveland, Seattle, Philadelphia.

Lidseen, Gustave (Oil cans), 332 S. Central Ave., Chicago, Ill.

Lightning Mfg. Co. (Belt dressing), Orchard and Torsdale Sts., Philadelphia, Pa.

Lille, Dexter P., Co. (Waste), Indian Orchard, Mass.; Springfield, Mass.

Lima Drill Press Co., The (Drilling machines), Lima, O.

Limbort, Geo. B., & Co. (Cast iron and flanged fittings), 559 Fulton St., Chicago, Ill.

Lincoln Electric Co. (Motors), Cleveland, O.; Boston, Buffalo, Charlotte, N. C.; Chicago, Cincinnati, Cleveland, Detroit, Minneapolis, New York, Philadelphia, Pittsburgh, Syracuse.

Lindahl, Henry, Machine Co. (Mach'y), 954 W. Lake St., Chicago, Ill.

Lindgren, F. W., Co. (Drilling machines), Rockford, Ill.

Lindholm Metal Stamping Co. (Grease cups), Camden, N. J.

Link-Belt Company (Conveyors, mach'y, etc.), 391h St. and Stewart Ave., Chicago, Ill.; Executive offices, 910 S. Michigan Ave., Chicago; Hunting Park Ave. and P. & R. Ry., Philadelphia; Michigan St. and Holmes Ave.; also Belmont Ave. and Big Four tracks, Indianapolis; 299 Broadway, New York; 49 Federal St., Boston; Park Bldg., Pittsburgh; 696 Ellicott Sq., Buffalo; 2d Nat'l Bank Bldg., Wilkes-Barre; 429 Rockefeller Bldg., Cleveland; 4210 Woodward Ave., Detroit; Central Nat'l Bank Bldg., St. Louis; 576 1st Ave. S., Seattle; 1st and Stark Sts., Portland, Ore.; 582 N. Los Angeles St., Los Angeles. Sales offices and agencies in other cities.

Link Belt Supply Co. (Boilers, tanks, machinery), 410 Third St., S. Minneapolis, Minn.

Link Mfg. Co. (Lubricators), 1115 West 43d St., Kansas City, Mo.

Linke, T. (Water filters), 235 W. 46th St., New York, N. Y.; Douglaston, L. I.

Linn-McCabe Co., Inc. (Sanitary drinking fountain), Casey, Ill.

Linton Machine Co., The (Feed water heater and purifier), 26 Cortlandt St., New York, N. Y.; 441 Atlantic Bldg., Boston.

Lipman Mfg. Co., The (Oil circulating pumps), 207 Pleasant St., Beloit, Wis.

Lipp, Louis, Co., The (Water closets), Mitchell Ave. and B. & O. Ry., Cincinnati, O.

Lippert, E. T., Saw Co. (Saws), 610 Lincoln Ave., Pittsburgh, Pa.

Lippincott, A. C. (Steam specialties), East Orange, N. J.; 50 Church St., New York.

Lippold Valve Co., The (Valves, etc.), 837 E. 7th St., Erie, Pa.

Lissberger, Marks & Son, Inc. (Lead, tin, etc.), 281 Borden Ave., Long Island City, N. Y.

Listers Agricultural Chemical Works (Case hardening compounds), Newark, N. J.

Litchfield Foundry & Machine Co. (Hoists), Litchfield, Ill.

Littell Machine Co., F. W. (Power presses), 4125 N. Ravenswood Ave., Chicago, Ill.

Litterer Bros. Mfg. Co. (Sinks, baths, drainboards, etc.), 730-40 N. Franklin St., Chicago, Ill.

Littleford Bros. (Melting furnaces and ladles), 453-457 E. Pearl St., Cincinnati, O.

Little Giant Co. (Power hammers), Mankato, Minn.

Little Giant Punch & Shear Co. (Punching and shearing machines), Sparta, Ill.

Little, J. R., Metal Wheel Co. (Metal wheels), 4 Cedar St., Quincy, Ill.

Little, M. S., Manufacturing Co., The (Plumbing supplies), 151 New Park Ave., Hartford, Conn.

Livermore, Homer E., Inc. (Iron and steel castings and drop forgings), 85 Pearl St., Boston, Mass.

Lloyd Engineering Co. (Shaft couplings), 460 Bloomfield Ave., Montclair, N. J.

Loane Engineering Co. (Marine engines), 208 Hanover St., Baltimore, Md.

Lobb, Parry & Co. (Slate sinks, trays, etc.), Danielsville, Pa.

Lobdell Car Wheel Co. (Car wheels), Wilmington, Del.; 50 Church St., New York.

Lobes Pump & Machinery Co. (Pumps), Dearborn and Parish Sts., Buffalo, N. Y.

Lock, H. & A., Co. (Mach'y guards), 243 44th St., Brooklyn, N. Y.

Lock Joint Pipe Co. (Concrete sewer pipe), 1123 Broadway, N. Y.

Locke Regulator Co. (Regulators, valves, etc.), 76 North St., Salem, Mass.

Locke Steel Chain Co. (Steel belting), Bridgeport, Conn.

Locke, Stevens & Co. (Clamps), 94 Warrenton St., Boston, Mass.

Lockett, A. M., & Co., Ltd., 6533 Baronne St., New Orleans, La.; Houston, Tex.; 508 Flat Iron Bldg., Fort Worth, Tex.; 305 Calcasien Bldg., San Antonio, Tex.; 331 Ward Bldg., Shreveport.

Lockhart-Hodge Co., Inc. (Mach'y guards), White Bldg., Buffalo, N. Y.

Lockhart, R. Jas. (Pipe vises), 201 Millvale Ave., Pittsburgh, Pa.

Locomotive Stoker Co. (Mechanical stokers), Robinson & Darrah Sts., N. S., Pittsburgh, Pa.

Lodge & Shipley Machine Tool Co. (Machine tools), 3055 Colerain Ave., Cincinnati, O.

Loeffelholz Co. (Nozzles), 170 Clinton St., Milwaukee, Wis.

Loewenthal Co., The (Metals), 947 W. 20th St., Chicago, Ill.; New York, Detroit.

Logansport Machine Co. (Chucks), Logansport, Ind.

Logansport Radiator Equipment Co. (Radiators), E. Erie Ave., Logansport, Ind.

Logemann Bros. Co. (Power presses, etc.), 3130 Burleigh Ave., Milwaukee, Wis.; 362-50 Church St., New York; 375 Old Colony Bldg., Chicago, Ill.; 278 Rockefeller Bldg., Cleveland, O.; 904 Chemical Bldg., St. Louis, Mo.

Loggers Oil Equipment Co. (Fuel oil burners), Portland, Ore.

Lombard Governor Co., The (Governors, recorders, etc.), Ashland, Mass.; Atlantic City; San Francisco; Seattle; Los Angeles; Portland, Ore.

Lombard Iron Works & Supply Co. (Mach'y, castings, etc.), 630 Kolloch St., Augusta, Ga.

Londelius, C. A., & Sons Co., Inc. (Contractors' water heaters), 847 W. 63d St., Chicago, Ill.

Loneragan, J. E., Co. (Steam specialties), 211 Race St., Philadelphia, Pa.

Long, Adam A. (Valve reseating machines), St. Paul St. and Ave. E., Rochester, N. Y.

Long & Allstatter Co., The (Machine tools), Hight and 4th Sts., Hamilton, O.

Long Island Broom Co. (Brooms) Long Island City, N. Y.

Lookout Boiler & Mfg. Co. (Boilers, steel tanks, etc.), Chattanooga, Tenn.

Loomis Machine Co. (Well drilling mach'y), Tiffin, O.

Loomis, A. O. (Gauges), Larimer, Pa.

Loomis-Manning Filter Distributing Co. (Water filters), 1421 South 37th St., Philadelphia, Pa.; 9203 Metropolitan Bldg., Life Tower, New York; 440 Exchange Bldg., Boston; 603 Calvert Bldg., Baltimore; 306 Colorado Bldg., Washington, D. C.; 942 Ellicott Sq., Buffalo.

Loper Fire Alarm Co. (Fire alarms), Stonington, Conn.

Lord, F. T., Polish Co. (Metal polish), 37 Hovey Ave., Cambridge, Mass.

Loshbough-Jordan Tool & Machine Co. (Power presses), Elkhart, Ind.

Los Angeles Smelting Co. (Babbitt and solder), Los Angeles, Cal.

Louden Machinery Co., The (Barn equipment), Fairfield, Ia.; Chicago; St. Paul; Albany, N. Y.

Lourie Manufacturing Co. (Hydraulic presses), Springfield, Ill.

Lovejoy, D. & Son. (Machine knives), Lowell, Mass.; 633 C Carondelet St., New Orleans.

♦ Lovejoy Tool Works (Boilermakers', machinists' and R.R. tools), 323 W. Ohio St., Chicago, Ill.; (See Index to advertisements, pages 7, 8 and 9.)

Lovejoy Tool Co., Inc. (Metal cutting tools), Springfield, Vt.

- Lovekin Pipe Expanding & Flanging Machine Co. (Machines, flanging), 421 Chestnut St., Philadelphia, Pa.; 232 Rialto Bldg., San Francisco.
- Lovekin Water Heater Co. (Water heaters), 27 Laurel St., Philadelphia, Pa.
- Lovett, A. E., Co. (Kerosene stoves, lamps and torches), 18 N. 22nd St., E. Orange, N. J.
- Lovsted, C. M., & Co. (Steam whistles), 1310 Alaska Bldg., Seattle; 1070 Phelan Bldg., San Francisco.
- Lowe Brothers Co., The (Paint for ironwork), 450 Third Ave., Dayton, O.; Boston; Jersey City; Chicago; Kansas City; Minneapolis.
- ◆ Lowell Wrench Co. (Wrenches, vises, etc.), Commercial St., Worcester, Mass.
- Lowerator Co., Inc. (Conveying machinery), York and Pearl St., Brooklyn, N. Y.
- Lowrie Mfg. Co. (Hydraulic presses), Springfield, Ill.
- Lowry-Knlse Tool Co. (Gages), 241 W. Adams St., Syracuse, N. Y.
- Loyal Brass Co. (Plumbing brass goods), 1122 St. Clair Ave. S. E., Cleveland, O.
- Lubenow Mfg. Co. (Machine screws), Milwaukee, Wis.
- Lubricating Metal Co. (Metal and packing), 2 Rector St., New York, N. Y.; Terminal Bldg., S. Side, Pittsburgh.
- Lubriko Co., The (Compounds), Meadow and Jackson Sts., Philadelphia, Pa.; Seattle, Wash.; San Francisco, Cal.
- Lubron Co., The (Packings), Everett, Mass.
- Lucas Machine Tool Co. (Machine tools), E. 99th St. and N. Y. C. R. R., Cleveland, O.
- Lucas, Chas. O., & Co. (Pumps, house electric), Dayton, O.
- Lucas Mfg. Co. (Electric lighting outfits), York, Pa.
- Lucas Miner Tool & Production Co. (Pumps), Dayton, O.
- Luce Co., Wm. D., The (Combustion control), 350 Kenosha Ave., Haverhill, Mass.
- Lucey Mfg. Corp. (Oil well supplies), Woolworth Bldg., New York, N. Y.; Houston, Chattanooga, Pittsburgh, Los Angeles.
- Lucey Mfg. Corp. of Tennessee (Drilling machines), Chattanooga, Tenn.
- Ludlow Valve Mfg. Co. (Valves), Troy, N. Y.; 62 Gold St., New York; 112 Water St., Boston; 633 Rookery, Chicago; 2022 1st Nat'l Bank Bldg., Pittsburgh; R. A. Long Bldg., Kansas City, Mo.
- Ludlum Electric Furnace Corp. (Electric furnaces), Watervliet, New York; 1238 W. Wash. Blvd., Chicago, Ill.
- Ludlum Steel Co. (Steel), Watervliet, N. Y.; Buffalo, Chicago, Cleveland, Detroit, New York, Philadelphia, Pittsburgh, San Francisco.
- Lueck, E. A., Co. (Drill press vises), Enterprise Bldg., Milwaukee, Wis.
- Lufkin Foundry & Machine Co. (Tanks), Lufkin, Tex.
- Lufkin Rule Co., The (Rules and measuring tapes), Saginaw, Mich.; 110 Lafayette St., New York.
- Luitwieler Pumping Engine Co. (Pumping engines), 123 Ames St., Rochester, N. Y.; 707 N. Main St., Los Angeles, Cal.
- Lukens Steel Co. (Boiler braces), Coatesville, Pa.; Philadelphia; New York; Boston; Baltimore; New Orleans. Representatives: A. M. Castle & Co., Chicago, Los Angeles and San Francisco; J. F. Corlett & Co., Cleveland, O.
- Lukomski Brothers Co. (Plumbing supplies), 2480 East Grand Blvd., Detroit, Mich.
- ◆ Lumen Bearing Co. (Brass, bronze and aluminum castings), 197 Lothrop St., Buffalo, N. Y.; Chicago, Ill.
- Lumsden, E. R. (Radiator tongs), Indiana, Pa.
- Lungmotor Co. (Pulmotors), 711 Boylston St., Boston, Mass.
- Lungwitz, Emil E. (Filter presses), 90 West St., New York, N. Y.; 14 E. Jackson Blvd., Chicago.
- ◆ Lunkenheimer Co., The (Steam specialties), Cincinnati, O.; 138 High St., Boston; 568 W. Wash. Blvd., Chicago; 129-35 Lafayette St., New York; 211 Compt St., New Orleans; 355 Fifth Ave., Pittsburgh; 116 New Montgomery St., San Francisco.
- Lunt-Moss Co. (Domestic waterworks), 48 S. Market St., Boston, Mass.; 37 Warren St., New York.
- Luther Grinder Mfg. Co. (Tool grinders), Milwaukee; 320 Market St., San Francisco.
- Luther Mfg. Co., Inc. (Machinery), Olean, N. Y.
- Lutter & Gies Co. (Shapers), 258 Lake St., Milwaukee, Wis.
- Lutz, Ferdinand (Flush tank valves), 555 W. Broadway, New York, N. Y.
- Lutz File Co. (File handles), 806 Broadway, Cincinnati, O.
- Lutz Co., Inc. (Wrenches, drill holders, etc.), Morris and Bambrey Sts., Philadelphia, Pa.; Camden, N. J.
- Lux, L. A., Co., The (Boiler compound), 2187 E. 2d St., Cleveland, O.
- Lyman, Benj. K., & Co. (Roofers' equipment), 312 W. Austin Ave., Chicago, Ill.
- Lynch-Clarisey Co. (Boiler compounds), 3211 S. Wood St., Chicago, Ill.
- Lynch, Edward, & Co. (Leather belting), 31 S. Clinton St., Chicago, Ill.
- Lynchburg Foundry Co. (Iron pipe and fittings), Lynchburg, Va.; 122 South Michigan Ave., Chicago.
- Lyon, Conklin & Co., Inc. (Metal roofing, etc.), Baltimore, Md.; 930-932 E. St., N.W., Washington, D. C.
- Lyon Metallic Mfg. Co. (Metal lockers, boxes, etc.), Aurora, Ill.; 122 S. Michigan Ave., Chicago; New York; Detroit; Pittsburgh; Cincinnati; Boston; Philadelphia; Rochester; St. Louis.
- Lyons-Atlas Co., The (Oil engines), Martindale Ave. and 19th St., Indianapolis, Ind.
- Lyons, Edward S. (Belt knives), Woburn, Mass.
- Lyons Felt Co. (Felt specialties), 333 Myrtle Ave., Brooklyn, N. Y.
- Lytton Mfg. Corp. (Traps, regulators, etc.), Franklin, Va.; 50 Church St., New York.

## M.

- M. & M. Rail Clamp Co. (Rail clamps), 912-16 Behan St., Pittsburgh, Pa.
- M. P. L. Packing & Supply Co. (Steam packing), 120 Liberty St., New York.
- M. & P. Tube Repair Co. (Boiler tube repairs), Box 531, Marseilles, Ill.
- McAlear Mfg. Co., The (Heating systems), 1901 So. Western Ave., Chicago, Ill.; Masonic Bldg., New York.
- McAuley Automatic Trap Co., The (Steam traps), 3d St. and Penn Ave., Pittsburgh, Pa.
- McCabe Hanger Mfg. Co., The (Expansion bolts), 425-427 W. 25th St., New York, N. Y.
- McCabe, J. J., Lathe & Mach'y Corp. (Metal working mach'y), 149 Broadway, New York, N. Y.
- McCaffrey File Co. (Files), Fifth and Berks Sts., Philadelphia, Pa.
- McCain, W. W., Co. (Radiator shields), 950 E. Maryland St., Indianapolis, Ind.
- McCambridge Co. (W. C. combinations), 20th and Wood Sts., Philadelphia, Pa.
- McCartney Boiler Co. (Tubular boilers), Mobile, Ala.
- McCauley Belting Co. (Leather belting), 412-420 Orleans St., Chicago, Ill.
- McChesney, J. S. & Co. (Hose clamps), 105 N. Clark St., Chicago, Ill.
- McClave-Brooke Co. (Mechanical stokers, grates, etc.), Scranton, Pa.; 326 W. Madison St., Chicago; 50 Church St., New York; 261 Franklin St., Boston.
- McClellan-Davidson (House heaters), Hanover, Pa.
- McClellan, Wm., Co. (Files and rasps), 3400 Hamilton Ave., N. E., Cleveland, O.
- McConnell Slate Co. (Plumbers' slate), 2445 Pacific St., Brooklyn, N. Y.
- McCord Mfg. Co. (Automobile fans, metallic gaskets), 2587 Grand Blvd., E., Detroit, Mich.; 165 Broadway, New York; Peoples Gas Bldg., Chicago.
- McCormick, J. S., Co. (Pattern letters and figures), 25th St., Pittsburgh, Pa.
- ◆ McCrosky Tool Corporation (Reamers, etc.), Meadville, Pa.
- McCullom, Geo. (Pipe hangers), Muskegon, Mich.
- McCullough-Dalzell Crucible Co. (Crucibles), 36th and A. V. Ry., Pittsburgh, Pa.
- McCullough Iron Co. (Iron sheets and roofing), Wilmington, Del.
- McCullough Mfg. Co. (Oil pumps), 2632 Central Ave., Minneapolis, Minn.
- (See index to advertisement, pages 7, 8 and 9.)
- McCurdy, Bernard (Steel flag poles), 9th and Arch Sts., Philadelphia, Pa.
- McDanell, C. E. (Domestic waterworks, etc.), Ottumwa, Ia.
- McDonald Foundry (Sewer castings), 108 West Liberty St., Columbus, O.
- McDonald, A. Y., Mfg. Co. (Plumbing supplies), 12th and Pine Sts., Dubuque, Ia.; Omaha, Neb.; Minneapolis, Minn.
- McDonald Under-Seal Valve Co. (Radiator valves), 602 Sweetland Bldg., Cleveland, O.
- McDonnell Boiler & Iron Works (Tanks and boilers), 121 E. Court Ave., Des Moines, Ia.
- McDonnell Odometer Co. (Speed indicators, etc.), 3501-3 S. Kedzie Ave., Chicago, Ill.
- McDonough Coal Saving Corp. (Regulators, etc.), 3566-60 Grand River Ave., Detroit, Mich.; Pittsburgh, Cincinnati, Chicago, New York.
- McDonough Mfg. Co. (Woodworking mach'y), Eau Claire, Wis.
- McDowell, Small, McKibben Co. (Pipe nipples), below Atlantic Ave., Camden, N. J.
- McEwen Mfg. Company (Gas engines), Tulsa, Okla.; Beggs, Okla.; Duncan, Okla.; Slick, Okla.
- McEwen Bros. (Blowers), Wellsville, N. Y.
- McFarland Foundry & Machine Co. (Castings and dies), Trenton, N. J.
- McEvoy, J. H., & Co. (Drive well points), Houston.
- McGill Mfg. Co. (Lamp guards, etc.), Valparaiso, Ind.; 618 W. Jackson Blvd., Chicago; 136 Liberty St., New York; 137 High St., Boston.
- McGookin, D. H., & Co. (Bolts, nuts, etc.), 1630 N. Ninth St., Philadelphia, Pa.
- McGowan, John H., Co., The (Pumps, etc.), 52-64 Central Ave., Cincinnati, O.
- McGraw, R. (Ball cocks), 217 Green St., Syracuse.

- McGraw Tire & Rubber Co. (Tires), East Palestine, O.
- McGregor Working Barrel Co., Inc. (Working barrels), 106 Elm St., Bradford, Pa.
- McGuire, L. C. (Conduit and pipe benders), 414 37th St., Brooklyn, N. Y.
- McGurra Supply Co. (Grease traps), Grand Rapids, Mich.
- (See index to advertisement, pages 7, 8 and 9.)
- ◆ McIlroy Belting & Hose Co. (Belting and hose), Hammond, Ind., 1427 W. 6th St., Cleveland.
- McIntosh & Seymour Corp. (Steam engines), Auburn, N. Y.
- McKaig Drop Forge Co. (Wrenches), Buffalo, N. Y.
- McKaig-Hatch, Inc. (Forgings and pliers), 1684 Niagara St., Buffalo, N. Y.
- McKay, Geo. C. (Electric tools), 1046 St. Clair Ave., Cleveland, O.
- McKenna Brass & Mfg. Co., Inc. (Brewers' brass goods), 1st Ave. and Ross St., Pittsburgh, Pa.
- McKenzie-Walton Mfg. Co. (Brass tubing), Pawtucket, R. I.
- McKenzie Furnace Co. (Stokers and grates), Orland, Ill.
- McKiernan-Terry Drill Co. (Air compressors and drills), 15 Park Row, New York, N. Y.
- McKinney Harrington Co. (Conveying machinery), North Chicago, Ill.
- McKinney Mfg. Co. (Trucks and door hangers), Pittsburgh, Pa.; 702 Wrigley Bldg., Chicago.
- McKinnon Dash Co. (Hose reels), Buffalo, N. Y.
- McKinnon Iron Works Co., The (Valve reseating machines), Ashtabula, O.
- McKneat Mfg. Co. (Fuel oil burners), 90 West St., New York.
- McLain-Carter Furnace Co., Milwaukee, Wis.
- McLanathan, F. W. & Son (Leather belting), 38 Water St., Lawrence, Mass.; 161 Summer St., Boston.
- McLanahan-Stone Machine Co. (Stone crushers), Holidayburg, Pa.
- McLane Mfg. Co. (Plumbers' woodwork), Milford, N. H.; 443 S. Dearborn St., Chicago, Ill.
- McLaughlin, Geo. C. Mfg. Co. (Gas engines, flue cleaners, pumps), 24 Washington St., North, Boston, Mass.
- McLean-Jones Oil & Sup. Co., Inc. (Oils and greases), 40 Court St., Boston, Mass.
- McLellan Mfg. Co. (Belt dressing), 265 W. 23d St., New York, N. Y.
- McLeod & Henry Co. (Iron and steel cement), Troy, N. Y.; 1402 Broadway, New York; 141 Milk St., Boston; Detroit.
- ◆ McLeod Leather & Belting Co. (Leather Belting), Greensboro, N. C.
- McMillan, James, & Co. (Smokeless furnaces), 114 Clarkson Court, Chicago.
- McMillan's, W. H., Sons (Tackle blocks, etc.), 153 South St., New York, N. Y.; 32 Penn St., Brooklyn, N. Y.
- McMyler Interstate Co. (Conveyors, cranes, buckets), Stop 27, A. B. & C. Elec. Ry., Cleveland, O.
- McNab & Harlin Mfg. Co. The (Steam supplies), 55 John St., New York, N. Y.; Paterson, N. J.
- McNally, Robt. J. (Water filters), 5618 Germantown Ave., Philadelphia, Pa.
- McNamara, M., Stamp & Stencil Works (Steel stamps), 85 Nassau St., New York, N. Y.
- McNaughton Mfg. Co. (Grates), Maryville, Tenn.
- McNaull Boiler Mfg. Co., The (Boiler fronts, mach'y castings, etc.), 222 Cherry St., Toledo, O.
- McNaull, W. D. Co., The (Water tube boilers), 223 Cherry St., Toledo, O.
- McNeil, James, & Bro. Co. (Steel tanks, etc.), 29th St., Pittsburgh, Pa.
- McNutt, W. H. (Garage traps), 83 Chambers St., New York.
- McRae & Roberts Co., The (Steam-water-gas brass goods), 100 S. Campbell Ave., Detroit, Mich.
- (See index to advertisement, pages 7, 8 and 9.)
- McShane Bell Foundry Co. (Plumbing brass goods), Harford Ave., and B. & O. Tracks, Baltimore, Md.
- McTaggart Mfg. Co. (Pipe hangers, etc.), 1235 Arch St., Philadelphia, Pa.
- McVicker, W. B. Co. (Boiler compounds, lubricants, etc.), 295 Douglass St., Brooklyn, N. Y.
- McWhinnie Wheelbarrow Co. (Wheelbarrows), Poughkeepsie, N. Y.
- Mabbs Hydraulic Packing Co. (Packings), 431 S. Dearborn St., Chicago, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- MacBeth Boiler Co. (Gas heating boilers), 1240 W. 4th St., Cleveland, O.
- Macbeth-Evans Glass Co. (Glassware), Chamber of Commerce Bldg., Pittsburgh, Pa.; New York; Cincinnati; Cleveland; San Francisco; Toronto, Can.; Philadelphia; Boston; Chicago; Buffalo.
- MacDonald, A. E. (Flush tank levers), 29 Hollywood St., Worcester, Mass.
- Machine Appliance Corp. (Hand punches), 351 Jay St., Brooklyn, N. Y.
- Machine Products Co. (Gear machinery), 179th St. and St. Clair Ave., Cleveland, O.
- Machinery Company of America (Woodworking machinery), Big Rapids, Mich.
- Mack & Co. (Wood planes and other tools), 98-106 Brown's Race, Rochester, N. Y.
- Mackay Mfg. Co. (Boilers and radiators), 64 James St., Newark, N. J.; 234 Water St., New York.
- Mackenzie-Walton Co. (Brass tubing), Pawtucket Ave., Pawtucket, R. I.
- Mackintosh, Hemphill Co. (Engines, mach'y, etc.), 12th and Etna Sts., Pittsburgh, Pa.
- Macleod & Co. (Furnaces, forges, etc.), 2236 Bogen St., Cincinnati, O.
- MacWhyte Co. (Rope), Kenosha, Wis.; Chicago, New York, Portland, Pittsburgh, Seattle, 805 American Trust Bank Bldg., Birmingham, Ala.
- Macungie Brass & Mfg. Co. (Bronze and aluminum castings), Macungie, Pa.
- MacWatty Belting Co. (Belting and packing), 7 Beverly St., Providence, R. I.
- Madden & Morrison File Co., Middletown, N. Y.
- Maddock, John, & Sons (Sanitary pottery), Coalport Pottery, Trenton, N. J.
- Maddock's, Thos., Sons Co. (Sanitary earthenware), Trenton, N. J.; Architects' Bldg., New York; 640 McCormick Bldg., Chicago.
- Madison Foundry Co., The (Sewer inlets), 935 Addison Ave., N.E., Cleveland, O.
- Madison-Kipp Corp. (Lubricators), Madison, Wis.
- Madison Machine Tool Co. (Grinding machines), 609 E. Washington Ave., Madison, Wis.
- Madison Mfg. Co. (Boring cutters and bars), Spring and Elton Sts., Muskegon, Mich.
- Mafreto Machine & Tool Co. (Punches), 53 Gardner St., Worcester, Mass.
- Magee Furnace Co., Inc. (Heating furnaces), Boston, Mass.
- Magee Steam Specialty Corp. (Radiator valves), 136 Beekman St., New York, N. Y.
- Magie Bros. (Lubricating oils), 110-112 S. Clinton St., Chicago, Ill.
- MaGill, P. H., Foundry & Furnace Works (Urinals), Bloomington, Ill.
- Magna Machine Co. (Furret tool posts), 626 Driggs Ave., Brooklyn, N. Y.
- Magnetic Mfg. Co. (Magnetic separators), 280 23rd Ave., Milwaukee, Wis.; Chicago; Cincinnati; Cleveland; Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis.
- Magnolia Metal Co. (Bearing metal), 113-115 Bank St., New York, N. Y.; Fisher Bldg., Chicago; San Francisco.
- Maguire Rubber Co. (Belting, hose, packing, etc.), 200 Fifth Ave., New York, N. Y.; 109 E. So. Water St., Chicago.
- Mahoney, A. D. (Boilers), 249-51 Earl St., Troy, N. Y.
- Mahoney, Daniel, & Sons (Lubricating oil), Buffalo.
- Mahoney Machinery Co. (Mill machinery), Erie, Pa.
- Mahr Mfg. Co. (Oil furnaces), Minneapolis, Minn.; 120 Liberty St., New York, N. Y.; Chicago, Detroit, Cleveland, Philadelphia.
- Main Belting Co. (Canvas belting, etc.), 13th and Carpenter Sts., Philadelphia, Pa.; Chicago, New York, Atlanta, Ga.; Pittsburgh, San Francisco.
- Maine Electric Co., The (Electric hoists), Portland, Me.
- Majestic Electric Development Co. (Electric heaters), 1705 Allegheny Ave., Philadelphia, Pa.
- Makutchan Roller Bearing Co. (Roller bearings), Joliet, Ill.
- Malleable Chain Co. (Conveyor chain), Meadville, Pa.
- Malleable Iron Fittings Co. (Fittings, pipe), Branford, Conn.; 176 Federal St., Boston.
- Malm Machine Co. (Rotary punch press), Dayton, O.
- Maltby, Geo. W., & Sons Co. (Plumbing brass goods), 21 Maryland St., Buffalo, N. Y.
- Manchester, Jas. E., Co., The (Copper boilers, lead pipe, etc.), 190 Eddy St., Providence, R. I.
- Manhattan Brass Co. (Bath room fittings), 332 E. 28th St., New York, N. Y.
- Manhattan Machine & Tool Works (Surface grinders), Grand Rapids, Mich.
- Manhattan Perforated Metal Co. (Perforated metals), 237-9 Centre St., New York, N. Y.
- ◆ Manhattan Rubber Mfg. Co., The (Belting, hose and packing), Passaic, N. J.; St. Louis, Chicago, New York, New Orleans, Birmingham, Boston, Atlanta, Pittsburgh, Buffalo, Cleveland, Baltimore, El Paso, Minneapolis, Columbus, Detroit, Philadelphia, Portland, Ore.; Salt Lake City, Seattle, Tulsa, Kansas City, Mo.; Spokane, San Francisco.
- ◆ Mannheim Mfg. & Belting Co. (Belting), Mannheim, Pa.
- Manistee Iron Works Co. (Pumps), Manistee, Mich.; New York; Philadelphia; Pittsburgh; Cincinnati; Cleveland; Detroit; Chicago; St. Louis; Milwaukee; St. Paul; New Orleans; Dallas; Denver; San Francisco; Seattle.
- Manley Mfg. Co. (Benches, work), York, Pa.
- Mann, Chas. A. (Lathes), 166 Doyle Ave., Providence.
- Mann Corporation (Vises, jacks, etc.), Kankakee, Ill.; 53 W. Jackson Blvd., Chicago.
- Mann Edge Tool Co. (Axes), Lewistown, Pa.
- Mann, James H., Co. (Axes), Lewistown, Pa.; 253 Broadway, New York, N. Y.

- Mannen, John E. Co., The (Gas furnaces and laundry dryers), 2241 St. Clair Ave., Cleveland, O.
- ♦ Manning, Maxwell & Moore, Inc. (Rail saws, belt clamps), 119 W. 40th St., New York.
- Mansfield Engineering Co. (Excavating mach'y), 108 N. Penn St., Indianapolis, Ind.
- Mansfield Lock & Washer Co. (Lock washers), Mansfield, O.; Chicago; Detroit; New York; San Francisco; Nashville; St. Paul.
- Manufacturers' Belt Hook Co. (Belt fittings), 1321 W. Congress St., Chicago, Ill.
- Manufacturers Equipment Co., The (Taps), Waller Ave. and Fillmore, Chicago, Ill.; 30 Church St., New York, N. Y.
- Manufacturers Equipment Co., The (Gas producers), Dayton, O.
- Manufacturing Equipment & Engineering Co. (Metal factory equipment), Framingham, Mass.
- Manufacturers Hardware Corp. (Index centers), Milwaukee, Wis.
- Manville, E. J., Machine Co., The (Power presses), Waterbury, Conn.
- Maple City Foundry & Furnace Co. (Heating furnaces), Monmouth, Ill.
- Marble, W. P., Co. (Valve wheels), 15 Chardon St., Boston, Mass.
- Marathon Electric Mfg. Co. (Electric fans), Wausau, Wis.; 332 S. La Salle St., Chicago, Ill.
- Marblethit Co., The (Tiling), Dayton, O.
- Marchant, Geo. F., Co. (Punches), 1422 S. Rockwell St., Chicago, Ill.
- Marcy Tool Works, Inc. (Tools), Putnam, Conn.
- Marden, Orth & Hastings Corp. (Core Oils and Compounds), 61 Broadway, New York.
- Maire Paint Co. (Paints), Minneapolis, Minn.
- Marietta Stone Co. (Grindstones), Marietta, Ohio.
- Marine Hardware Equipment Co. (Marine hardware), South Portland, Maine.
- Marine Iron Works (Marine engines and mach'y), 2036 Dominick, Chicago, Ill.
- Marine Mfg. & Supply Co. (Marine hardware), 158 South St., New York.
- Marion Machine, Foundry & Supply Co. (Boilers, grates, etc.), Marion, Ind.; Scottsdale, Pa.
- Marion Foundry Corp. (Boiler grates), Marion National Bank Bldg., Marion, Ind.
- Marion Steam Shovel Co., The (Steam shovels and dredges), Marion, O.
- Maris Bros. (Traveling cranes and trolleys), 56th St. and Gray's Ave., Philadelphia, Pa.
- ♦ Mark Mfg. Co. (Pipe and fittings), Conway Bldg., Chicago, Ill.
- Marschke Mfg. Co. (Grinding machine), Indianapolis, Ind.
- Marsh, Chas. W., Co. (Leather packing), 33 Hudson St., Muskegon, Mich.; 63 E. Adams St., Chicago, Ill.; 296 Broadway, New York; Frisco Bldg., St. Louis, Mo.
- Marsh, Jas. P., & Co. (Valves, gauges, etc.), 118-124 S. Clinton St., Chicago, Ill.
- Marsh Valve Co. (Globe valves), Erie, Pa.
- Marshall-Wells Hdw. Co. (Boilers and radiators), Duluth, Minn.; Portland, Ore.; Spokane; Winnipeg.
- Marshall, Wm., Steam Boiler Works (Boilers and tanks), Dubuque, Iowa.
- Marston, I. G., & Co. (Washers), 226 Ruggles St., Boston, Mass.
- Martell Packings Co. (Metallic packing), Elyria, O.
- Martin (Water heaters and plumbing fittings), Buchanan St., Fort Wayne, Ind.
- Martin Grate Co. (Grates), 343 S. Dearborn St., Chicago, Ill.
- Martin, J. E., Tool & Die Co. (Vises), 548 W. State St., Springfield, Ohio.
- Martin Machine Co. (Marking machines), Turners Falls, Mass.
- Martin, H. P., & Sons (Portable vise benches and stands), Owensboro, Ky.
- Martini & Huneke Co. of America (Gasoline storage system), 1201 Hudson St., Hoboken, N. J.
- ♦ Marvin & Casler Co. (Boring heads), Canastota, N. Y.
- Marx-Whittington Co. (Pipe vises), Easton, Pa.
- Mason Brush Works (Brushes), 553 Main St., Worcester, Mass.
- Mason, Volney W., & Co., Inc. (Clutches and pulleys), Lafayette St., Providence, R. I.
- ♦ Mason Regulator Co., The (Regulators and valves), Dorchester Center, Boston, Mass.; 606 Howard St., San Francisco; 135 Dagenias St., Montreal.
- Massachusetts Blower Co. (Fans and blowers), Watertown, Mass.
- Massachusetts Machine Shop Co., Inc. (Metal washers), 54-57 Commercial St., Worcester, Mass.
- Masseth Packer & Machine Co. (Well drilling mach'y and tools), 121 W. Wayne St., Butler, Pa.
- Massey Machine Co. (Engine governors), Watertown, N. Y.
- Massillon Foundry & Machine Co., The (Steam hammers), Massillon, O.
- Massillon Iron & Steel Co. (Pipe and fittings), Massillon, O.; Bessemer Bldg., Pittsburgh, Pa.; Rookery Bldg., Chicago, Ill.
- Massasoit Mfg. Co. (Cotton waste, etc.), Fall River, Mass.; 56 Leonard St., New York; 16 Columbia St., Boston.
- Mast, Foos & Co. (Pumps, etc.), Springfield, O.
- Master Heat Regulator Co., 2363 University Ave., St. Paul, Minn.
- Master Machine Tool Co. (Lathes), New York.
- Matchless Brass Mfg. Co. (Gas lamps and burners), 57-59 Jay St., Brooklyn, N. Y.
- Materne Mfg. Co. (Pipe and fittings), 18th and Gratiot Sts., St. Louis, Mo.; 51 Maiden Lane, New York.
- Mather, Edmund, Co. (Steam specialties), 204 Walnut St., Harrisburg, Pa.
- Mather Machine Wks. (Kettles and vises), E. 105th St. and Nickel Plate Crossing, Cleveland, O.
- Mathews Gravity Carrier Co. (Elevating and conveying mach'y), Ellwood City, Pa.
- Mathews Slate Co., The (Roofing slate), Poultney, Vt.
- Mathis Bros. Co., The (Fans and blowers), S. W. cor. Archer Ave. and Canal St., Chicago, Ill.
- Matlack, W. H. (Gas machines), Louisville, Ky.
- Mattatuck Mfg. Co., The (Plumbers' chain, etc.), Waterbury, Conn.; 215 Fulton St., New York.
- Matthews Engineering Co., The (Electric lighting outfits), Sandusky, O.
- Matthews Gas Machine Co. (Gas generating machines), 3 East Lake St., Chicago, Ill.
- Matthews, H. A., Mfg. Co., The (Valve handles), Seymour, Conn.
- Matthews, Jas. H., & Co. (Pattern letters and figures), 3942 Forbes St., Pittsburgh, Pa.
- Matthews, W. N., & Brother, Inc. (Heaters), 2922 Easton Ave., St. Louis, Mo.
- Master Rule Mfg. Co., Inc. (Rules), 841 E. 136th St., New York.
- Mattison, C., Machine Works (Woodworking mach'y), Rockford, Ill.; 602 Times Bldg., New York; 513 Am. Bank Bldg., Greensboro, N. C.; 1735 Republic Bldg., Chicago; 553 Monadnock Bldg., San Francisco.
- Max Machine Co. (Valves, etc.), 52 Laurel St., Clinton, Mass.
- Maxf Grinding Wheel Corp. (grinding wheels), Chester, Mass.
- Maxson & Maxson Co. (Staple pullers and fencing pliers), West Edmeston, N. Y.
- May-Nelson Mfg. Co. (Centrifugal pumps), 1202 F St. N. W., Washington, D. C.
- ♦ Maydole, David, Hammer Co., The (Hammers), Norwich, N. Y.
- Mayhew Steel Products, Inc. (Screwdrivers), 291 Broadway, New York, N. Y.
- Mayo-Skinner Mfg. Co. (Auto accessories), 2115 Elston Ave., Chicago, Ill.
- Maywood Water Heater Co. (Water heaters), Maywood, Ill.
- Maze, W. H., Co. (Roofing nails), Peru, Ill.
- Meachem Gear Corp. (Gears), Canal St. and West Shore R. R., Syracuse, N. Y.
- Mead Gas Heater Co. (Radiators and gas logs), Delawanna, N. J.
- Mead-Morrison Mfg. Co. (Gravity conveying apparatus), Prescott and Orleans Sts., East Boston, Mass.; Monadnock Bldg., Chicago; 149 Broadway, New York.
- Meadville Wrench Co. (Wrenches), Meadville, Pa.
- Mechanical Devices Co. (Flexible joints), Watervliet, N. Y.
- Mechanical Machine & Tool Works (Chain wrenches), 549 Fulton St., Chicago, Ill.
- Mechanical Rubber Co. (Mechanical rubber goods), 2639 W. Grand Ave., Chicago.
- Mechanical Specialties Co., The (Pipe wrenches), 1619 N. Western Ave., Chicago, Ill.
- Mechanics Tool Co. (Pliers, wrenches), Rockford, Ill.
- Mechanicsville Specialty Supply Mfg. Co. (Plumbing fittings), Mechanicsville, N. Y.
- Mecklenburg Iron Works (Steam engines, boiler castings, etc.), Charlotte, N. C.
- Medart, Fred, Mfg. Co. (Metal lockers), De Kalb and President Sts., St. Louis, Mo.
- ♦ Medart Patent Pulley Co. (Power transmission mach'y), 3500 De Kalb St., St. Louis, Mo.; Cincinnati, Chicago, Philadelphia.
- (See index to advertisement, pages 7, 8 and 9.)
- Medina Foundry Co. (Pipe and fittings), 130 Fuller Ave., Medina, N. Y.
- Medina Iron & Brass Co. (Pipe and fittings, etc.), 528 East Ave., Medina, N. Y.
- Meek Oven Mfg. Co., Newburyport, Mass.
- Meerhoff, H. H. (Sewer connection valves), Richmond, Ind.
- Meerhoff, Wm. H. (Water heaters), Richmond, Ind.
- Meese & Gottfried Co. (Power transmission and conveying mach'y), 660 Mission St., San Francisco, Cal.; 658 1st Ave., S., Seattle; 67 Front St., Portland; 400 E. 3rd St., Cor. San Diego, Los Angeles.
- Mehl Machine Tool & Die Co. (Special machinery), Roselle, N. J.; 338 Elizabeth, N. J.
- Meier-Andres Belting Co. (Leather belting), 128-130 Mulberry St., Newark, N. J.
- Meier's, Joseph, Sons (Leather belting), Newark, N. J.
- Meisselbach-Catucci Mfg. Co. (Gear hobbing machines, etc.), 29 Congress St., Newark, N. J.
- Melbye Bros. Co. (Water heaters), 1208 Webster Ave., Chicago, Ill.

- Memphis Machine Works (Sawmill mach'y), 171 Vance St., Memphis, Tenn.
- Memphis Steel Construction Co. (Steel tanks), Pittsburgh, Pa.
- Menasha Clutch Pulley & Machinery Co. (Clutch pulleys, etc.), Menasha, Wis.
- Menasha Wood Split Pulley Co. (Pulleys and factory trucks), Menasha, Wis.
- Meneely Bell Co. (Bells), 22-26 River St., Troy, N. Y.; 198 Broadway, New York.
- Menge Pump & Machinery Co., Ltd. (Irrigation pumps), 862 Tchoupitoulas St., New Orleans, La.
- ◆ Mercer Rubber Co. (Packings), Hamilton Square, N. J.
- Merchant & Evans Co. (Metal products), 2013-35 Washington Ave., Philadelphia, Pa.; 242 Water St., New York; 347 N. Sheldon St., Chicago; 232 St. Paul St., Baltimore; Atlanta; Cleveland; St. Louis; Kansas City; Denver.
- Mercury Mfg. Co. (Factory motor trucks), 4118 S. Halsted St., Chicago; 25 Church St., New York; Bourse Bldg., Philadelphia; Plymouth Ct. Bldg., Cleveland; 10 High St., Boston; Real Est. Ex. Bldg., Detroit; 1st Nat'l Bank Bldg., Pittsburgh.
- Mergenthaler Co., The (Reamers and cutters), Baltimore, Md.; 2044 Grand Central Terminal, New York City.
- Meriden Machine Tool Co., The (Lathes, etc.), 106 Britannia St., Meriden, Conn.
- Meriden Press & Drop Co., The (Power presses, etc.), Meriden, Conn.
- Merkle Broom Co. (Factory brushes), Paris, Ill.
- Merrell Mfg. Co. (Threading and cutting mach'y), 208 Curtis St., Toledo, O.
- Merrill Bros. (Vises, etc.), Arnold St. and L. I. R. R., Maspeth, New York, N. Y.
- Merrill Company, The (Plug valves), 121 Second St., San Francisco, Calif.; Monadnock Bldg., Chicago; Hudson Terminal Bldg., New York.
- Merrill, W. B., & Co. (Metallic packing), 3368 Washington St., Jamaica Plain, Boston, Mass.
- Merrill, E. C. (Gas burners and heaters), 2915 Smallman St., Pittsburgh, Pa.
- Merrill Machinery & Sup. Co. (Set screws), Merrill, Wis.
- Merriman Bros. (Megaphones, tackle blocks, etc.), 185 Armory St., Jamaica Plain, Boston, Mass.
- Merritt Mfg. Co. (Woodworking mach'y), Michigan and S. Niagara Sts., Lockport, N. Y.
- Merry Optical Co. (Goggles), 1009 Walnut St., Kansas City, Mo.
- Mesker Bros. Iron Co. (Metal sash and doors), 6th, Poplar and 7th Sts., St. Louis, Mo.
- Messer Welding Supply Corp. (Oxy-acetylene apparatus), 113 Eleventh St., Brooklyn, N. Y.; San Francisco.
- Messinger Mfg. Co., The (Heating boilers), Tatamy, Pa.
- Mesta Machine Co., The (Engines and mach'y), Oliver Bldg., Pittsburgh, Pa.
- Metal Hose & Tubing Co., Inc. (Metallic hose), Raymond and Tillary Sts., Brooklyn; Boston, Cleveland, Philadelphia, Chicago, San Francisco.
- Metallo Gasket Co. (Gaskets), 20 Bethany St., New Brunswick, N. J.; 132 Nassau St., New York; Empire Bldg., Pittsburgh, Pa.
- Metals Production Equipment Co. (Burners, powdered coal), 105 N. 40th St., New York, N. Y.
- Metal Crafters, The (Bathroom fittings), E. Stroudsburg, Pa.
- Metal Products & Supply Co. (Iron bars), 1224-30 Washington Ave., Philadelphia, Pa.
- Metal Saw Machine Co., Inc. (Metal cutting saws), Springfield, Mass.
- Metal Stamping Co. (Bolt clippers), 13th and 14th Sts., Boulevard, Long Island City, N. Y.
- Metal & Thermit Corp. (Welding), 120 Broadway, New York, Chicago, Pittsburgh, San Francisco, Boston, Toronto.
- Metaline Co. (Self lubricating bushings), Third St., Long Island City, N. Y.
- Metaline Chemical Co., The (Boiler compounds), 339 Society for Savings Bldg., Cleveland, O.; 1124 Republic Bldg., Chicago; 386 Belmont Ave., Newark, N. J.
- Metalwood Mfg. Co. (Hydraulic fittings and valves), Lieb & Wight Sts., Detroit, Mich.
- (See Index to advertisements, pages 7, 8 and 9.)
- Metlakin Co., Inc. (Boiler preservative), 123 Andrews St., Rochester, N. Y.; 271 James St., Syracuse.
- Metric Packing Co., Inc. (Sheet Packing), Buffalo, N. Y.; 80 East Jackson Blvd., Chicago, Ill.; Boston, Cleveland, Detroit, New York, Minneapolis, Los Angeles, Philadelphia, Pittsburgh, New Orleans.
- Metric Metal Works (Gas meters), Erie, Pa.
- Meurer Steel Barrel Co., Inc. (Metal roofing, etc.), 25 West 43rd St., New York, N. Y.; San Maria Bldg., San Francisco; Title Insurance Bldg., Los Angeles; 402 Wells-Fargo Bldg., New Orleans; 329 Bakewell Bldg., Pittsburgh.
- Mey Chain Belt Company (Sprocket wheel chains), 87 Washington St., Buffalo, N. Y.
- Meyer Burstein & Sons (Waste), Neenah, Wis.
- Meyer, Geo. J., Mfg. Co. (Tanks and boilers), 576 Clinton St., Milwaukee, Wis.; Chicago, New York.
- Meyer-Sniffen Co., The (Plumbing goods), 11 W. 36th St., New York, N. Y.
- Meyers Mfg. Co., The (Steam water heaters), Lancaster, Pa.
- M. H. Foundry & Mfg. Co. (Cast iron fittings, drinking fountains, etc.), Belleville, Ill.
- Mianus Motor Works, The (Gas engines), Stamford, Conn.; Baltimore, New York, Boston, Norfolk, Va.; Portland, Me.
- Mica Insulator Co. (Mica manufacturers), 68 Church St., New York, N. Y.; 542 S. Dearborn St., Chicago.
- Michaud, Elmer J. (Lathe dogs), 42 John St., Wilimantic, Conn.
- Michelmunn Steel Construction Co. (Boilers, grates, etc.), Second and Hampshire Sts., Quincy, Ill.
- Michigan Bolt & Nut Co. (Nuts and bolts), Foot of Meldrum Ave., Detroit, Mich.
- Michigan Copper & Brass Co., The (Copper, brass sheets and tubes), 5851 W. Jefferson Ave., Detroit, Mich.
- Michigan Forge & Tool Works (Forgings, etc.), 7360 Richmond Ave., Detroit, Mich.
- Michigan Leather Packing Co., Inc. (Packings), 620 Antonio St., Detroit, Mich.
- ◆ Michigan Lubricator Co. (Lubricators, valves, etc.), 3643 Beaubien St., Detroit, Mich.; 86 Warren St., New York, N. Y.
- Michigan Machine Co. (Lubricating pumps), 951 Porter St., Detroit, Mich.
- Michigan Mfg. & Lumber Co. (Factory trucks), Holly, Mich.
- Michigan Metal Spinning & Mfg. Co. (Closet tank floats), 2130 E. Woodbridge, Detroit.
- Michigan Pipe Co., The (Wood pipe), Bay City, Mich.
- Michigan Saw Co. (Saws), 101-9 Federal Ave., Saginaw, Mich.
- Michigan Smelting & Refining Co. (Metals); 7839 Jos. Camp, Detroit, Mich.; Cleveland, O.; Chicago, New York.
- Michigan Sprocket Chain Co. (Chains, etc.), Detroit, Mich.; 126 Chambers St., New York.
- Michigan Stamping Co. (Water closet seats), 11631 Mack Ave., Detroit.
- Michigan Stove Co., The (Gas stoves and heaters), 3310 E. Jefferson, Detroit, Mich.; Chicago, Ill.
- Michigan Tool Co. (Milling cutters), 402 E. Jefferson St., Detroit, Mich.
- Michigan Wire Cloth Company (Wire, wire screens, etc.), 2100 Howard St., Detroit, Mich.
- Midvale Steel and Ordnance Co. (Steel tubing), Philadelphia, Pa.
- Middletown Machine Co., The (Gas engines), Middletown, O.; 39-41 Cortlandt St., New York.
- Midland Brass Works, Inc. (Plumbing brass goods), 15th and Jennings Ave., Fort Worth, Texas; 217 Broadway, New York.
- (See index to advertisement, pages 7, 8 and 9.)
- Midland Metal Mfg. Co. (Roof flashings), 1219 Lydia St., Kansas City, Mo.
- Midwest Engine Co. (Engines), Indianapolis, Ind.
- Mietz, August, Corporation (Pumps and engines), 428-34 East 19th St., New York City.
- Mikesell Bros. Co. (Pipe covering), 156 N. La Salle St., Chicago, Ill.
- ◆ Milburn, Alexander, Co., The (Welding apparatus), 1420-26 W. Baltimore St., Baltimore, Md.; Boston, Chicago, New York, Pittsburgh, San Francisco.
- (See index to advertisement, pages 7, 8 and 9.)
- Miles, Franklin S., Co. (Screws), 205-207 Quarry St., Philadelphia, Pa.
- Millar, Chas., & Son Co. (Pipe and fittings, plumbers' and steamfitters' supplies), 301-321 Main St., Utica, N. Y.; 36 Susquehanna St., Binghamton, N. Y.
- Miller, A. W., Mfg. Co. (Mortising machines), 3425 Erie Ave., Cincinnati, O.
- Miller, Chas. A., Co. (Plumbers' woodwork and specialties), Sturgis, Mich.; 5-7 E. 42d St., New York.
- Miller, Chas. E. (Vulcanizers), Anderson, Ind.
- Miller, E. L., Mfg. Co. (Filters, engine stops, etc.), 22 West 3rd St., Kansas City, Mo.
- Miller Chemical Engine Co. (Fire extinguishers), 837-39 Larrabee St., Chicago, Ill.
- Miller, Edward, & Co. (Lamps, etc.), 99 Center St., Meriden, Conn.; 48 Park Pl., New York; 63 Pearl St., Boston.
- Miller Engine Co. (Marine gas engines), 2329-31 N. Talmay Ave., Chicago, Ill.
- Miller Foundry & Specialty Co. (Plumbing specialties), North Tonawanda, N. Y.
- Miller Improved Gas Engine Co., The (Gas engines), Springfield, O.
- Miller, O. A., Slate Co. (Plumbing and structural slate), Stratton, Pa.
- Miller, Wm. P., Co. (Oils and greases), 244-50 Greene St., Brooklyn, N. Y.; 4718 Cottage Grove Ave., Chicago, Ill.



- Miller Waste Mfg. Co., Inc. (Cotton and woolen waste), N. E. cor. Snyder Ave. and Swanson St., Philadelphia, Pa.
- Miller & West (Washers), 917 East St., Dedham, Mass.
- Miller Wire Cloth Co. (Wire cloth), 72 Commercial St., Worcester, Mass.
- Miller Wrench Co. (Belt shifters and wrenches), 1054-56 S. Clinton St., Syracuse, N. Y.
- ♦ Millers Falls Co. (Saws, drills and tools), Millers Falls, Mass.; 28 Warren St., New York, N. Y.
- Millholland Machine Co. (Lathes), Indianapolis, Ind.; New York.
- Milliken Brothers Mfg. Co., Inc. (Steel buildings, etc.), Woolworth Bldg., New York.
- Mills Machine Co. (Paper mill machinery), Lawrence, Mass.
- Mills, W. A., Brass Co. (Castings), Port Chester, N. Y.
- Milton Mfg. Co., The (Nuts), Milton, Pa.
- Milton, S. G., & Son (Well pulling machines), Franklin, Pa.
- Milwaukee Air Power Pump Co. (Water supply systems), 833 Third St., Milwaukee, Wis.
- Milwaukee Boiler Mfg. Co. (Furnaces, boilers, etc.), 35th and National Ave., Milwaukee, Wis.
- Milwaukee Brush Mfg. Co. (Brushes), Milwaukee, Wis.
- Milwaukee Cock Grinding Machine Co. (Cock grinders), 818 Winnebago St., Milwaukee, Wis.
- Milwaukee Electric Crane & Mfg. Co. (Cranes and hoists), Milwaukee, Wis.; Chicago, New York, Pittsburgh, Portland.
- Milwaukee Flush Valve Co. (Bath cocks), 111 Reservoir Ave., Milwaukee, Wis.
- Milwaukee Heater Mfg. Co., The (Heating boilers), 458 Eleventh Ave., Milwaukee, Wis.
- Milwaukee Leather Belting Co. (Leather belting), 146 W. Water St., Milwaukee, Wis.
- Milwaukee Locomotive Mfg. Co. (Locomotives), Milwaukee, Wis.; Chicago; Knoxville; Pittsburgh; Huntington, W. Va.
- Milwaukee Machine Tool Co. (Engine lathes), West Allis, Milwaukee, Wis.
- Milwaukee Mfg. Co. (Water heaters), 1816 Fond du Lac Ave., Milwaukee, Wis.
- Milwaukee Optical Mfg. Co. (Goggles), Milwaukee, Wis.
- Milwaukee Reliance Boiler Works (Pneumatic tanks), 1102 32d St., Milwaukee, Wis.
- Milwaukee Shaper Co. (Shapers and clutches), 1148 Holton St., Milwaukee, Wis.
- Milwaukee Tack Co. (Bearing metal, tacks, nails, etc.), 27th and Wahl Sts., Milwaukee, Wis.
- Milwaukee Tank Works, Inc. (Oil storage tanks), Fratney and Beecher Sts., Milwaukee, Wis.; Broadway and 34th St., New York; 510 Tremont Bldg., Boston; 230 Plymouth Bldg., Cleveland; 20 E. Jackson Blvd., Chicago; Hennepin & 6th, Minneapolis; 1407 Waldheim Bldg., Kansas City.
- Milwaukee Tool & Forge Co. (Tools), 220 Becher St., Milwaukee, Wis.
- Milwaukee Valve Co. (Valves), 139 Burrell St., Milwaukee, Wis.; 1 Madison Ave., New York.
- Mine Safety Appliances Co. (Safety equipment), Chamber of Commerce Bldg., Pittsburgh, Pa.
- Mine & Smelter Supply Co., The (Mining mach'y), 131-135 W. Second St., Salt Lake City, Utah.
- Miner & Peck Mfg. Co. (Blast gates, etc.), Derby, Conn.
- Miner, J. H., Saw Mfg. Co. (Saws), Meridian, Miss.
- Mining Safety Device Co., The (Mining safety devices), Bowerston, O.
- Minneapolis Heat Regulator Co. (Thermostats), 2753 4th Ave. S., Minneapolis, Minn.
- ♦ Minnesota Mining & Mfg. Co. (Sandpaper), St. Paul, Minn.; 564 W. Monroe St., Chicago, Ill.; Boston; New York; Philadelphia.
- Minnesota Radiator Co. (Radiators), West Duluth, Minn.; 616 N. 1st St., Minneapolis, Minn.; Mason City, Ia.
- Minnesota Tank Co. (Wooden tanks, expansion joints), Minneapolis, Minn.
- Minnich Machine Works (Baling presses), Landisville, Pa.
- Minster Machine Co., The (Vacuum pumps, power transmission mach'y), Minster, O.
- Missouri Belting Co. (Leather belting), Grand and La Salle Sts., St. Louis, Mo.; 120 Liberty St., New York.
- Missouri Engine Co. (Gas and oil engines), 11th St. and St. Louis Ave., St. Louis, Mo.
- Missouri Lamp & Mfg. Co. (Fire extinguishers), 114-118 Elm St., St. Louis, Mo.
- Missouri Water & Steam Supply Co. (Expansion tanks), 816 So. 6th St., St. Joseph, Mo.
- Mitchell, A. L., & Son (Washers), 277 Ralph Ave., Brooklyn, N. Y.
- Mitchell Grindstone Wks. (Grindstones), Phila., Pa.
- Mitchell, W. K., & Co., Inc. (Pipe fittings), 2940 Ellsworth St., Philadelphia, Pa.
- Mitts & Merrill (Woodworking mach'y), 998 S. Water St., Saginaw, Mich.
- Mixer, J. W., Saw Tool Co. (Saw swages, etc.), Plymouth, Mass.
- Moak Machine & Tool Co. (Power plant appliances, etc.), Port Huron, Mich.
- Moback Tool & Machine Mfg. Co. (Vises), 330 Atlantic Ave., Boston, Mass.
- Mobile Steel Co. (Sheet metal products), Mobile, Ala.
- Mockbee, C. M., Co. (Wire rope fittings), 816 E. Pearl St., Cincinnati, O.
- Model Generator Co. (Acetylene gas generators), 1717-23 Magazine St., Louisville, Ky.
- Modern Engineering Co. (Welding apparatus), 23d and Walnut Sts., St. Louis, Mo.
- ♦ Modern Equipment Co. (Electric gas and oil furnaces), Taunton, Mass.
- Modern Equipment Co. (Paper balers), Lockport, N. Y.
- Modern Grinder Mfg. Co. (Tool grinders), Milwaukee, Wis.; 34 N. Clinton St., Chicago; 74-76 Murray St., New York.
- Modern Iron Works (Plumbing, steam, gas and water specialties), Fifth and Ohio Sts., Quincy, Ill.
- Modern Machinery Co., The (Stocks and dies), Wilmington, Del.
- Modern Mfg. Co. (Die sinking machines), 75 Third St., Bridgeport, Conn.
- Modern Mfg. Co., The (Pipe hangers, lag screws), 1872 E. 55th St., Cleveland, O.
- (See index to advertisement, pages 7, 8 and 9.)
- Modern Pattern & Machine Co. (Disc grinders), 451 Monroe, Detroit, Mich.
- Modern Tool & Machine Works, Inc. (Grinding fixtures), 344 Mulberry St., Newark, N. J.
- Modern Tool Co. (Threading tools), 5th and State Sts., Erie, Pa.
- Modoc Co., Inc., The (Boiler compounds, disinfectants), Fernwood, Pa.
- Moeller, A. E. (Thermometers), 263 Sumpter St., Brooklyn, N. Y.
- Moffat Field Water Heater & Purifier Co. (Heaters and Purifiers), Dayton, O.; 549 Washington Blvd., Chicago; 9 N. 8th St., St. Louis.
- Moffatt Machinery Mfg. Co. (Power pumps), Charlotte, N. C.
- Mohaw Refining Co. (Compounds, boiler), 1187 W. 11th St., Cleveland, O.
- Mohawk Refining Co. (Compounds, boiler), 1187 W. 11th St. N. W., Cleveland, O.
- Mohegan Tube Co., The (Steel tubing), 308 Scott Ave., Brooklyn, N. Y.
- Mohn, W. D., & Co. (Drill vises), Cor. Cherry and Carpenter Sts., Reading, Pa.
- Mohr, John, & Sons (Tubular boilers), 849 W. Illinois St., Chicago, Ill.
- Moline Mill Mfg. Co., The (Flour mill machinery), Moline, Ill.
- Moline Heat (Heating systems), Moline, Ill.
- Moline Malleable Iron Co. (Link belt and sprockets), St. Charles, Ill.; 1357 Ridge Ave., Philadelphia, Pa.
- Moline Tool Co. (Machine tools), Moline, Ill.
- Mollenberg-Betz Machine Co. (Clutches), 110 Washington St., Buffalo, N. Y.
- Moller Machine Co. (Drill chucks), Box 242, New Rochelle, N. Y.
- Moloch Company, (Hammers), Kaukauna, Wis.
- Moloch Stoker Co. (Stokers), 208 S. La Salle St., Chicago, Ill.
- Moloney Belting Co. (Leather belting), 130 N. Franklin St., Chicago, Ill.; 445 Camp St., New Orleans, La.; 418 E. Water St., Norfolk, Va.; 49 First St., Portland, Ore.; 1715 Griffin, Dallas, Texas.
- ♦ Moltrup Steel Products Co. (saws), 1st Ave. and 14th St., Beaver Falls, Pa.
- Monahan, Thos. W. (Steam traps), Newdorp, Borough of Richmond, New York, N. Y.
- Monarch Boiler Arch Co. (Boiler arches), 1838-1839 Wells Bldg., Milwaukee, Wis.
- Monarch Brass Co., The (Brass plumbing goods), Payne Ave. and Hoadley St., Cleveland, O.
- Monarch Engineering & Mfg. Co., The (Crucible furnaces), Baltimore, Md.
- Monarch Expansion Bolt Co. (Expansion bolts), 4326 W. 1st St., Duluth, Minn.
- Monarch Machine Tool Co. (Engine lathes), Sidney, O.
- Monarch Machine Works (Blow-off valves), 714-716 Green Ave., Altoona, Pa.
- Monarch Mfg. Co. (Oils and greases), Council Bluffs, Ia.; Toledo, O.
- Monarch Mfg. Co. (Welding apparatus), Dayton, O.
- Monarch Metal Co. (Bearing metal), 119 S. Lincoln St., Chicago, Ill.
- Monarch Steam Blower Co., The (Flue blowers), Oakwood Ave., Troy, N. Y.; Boston; Cincinnati; Indianapolis.
- Monash-Younger Co. (Heating specialties), 553-57 W. Monroe St., Chicago; 121 W. 42d St., New York.
- Monitor Bi-Loop Radiator Co. (Radiators), Lancaster, Pa.
- Monmouth Acetylene-Electric Mfg. Co. (Acetylene gas generators), Monmouth, Ill.
- Monmouth Clay Mfg. Co. (Sewer pipe and fittings), Monmouth, Ill.
- Monongahela Tube Co. (Boiler tubes, well casing, etc.), Ferguson Bldg., Pittsburgh, Pa.
- Monroe Foundry & Furnace Co. (Heating furnaces and boilers), Monroe, Mich.



- Montague Iron Works Corp. (Machinery), 189 W. Madison St., Chicago, Ill.; 1011 Chestnut St., Philadelphia; 6 West Lombard St., Baltimore, Md.
- Montgomery Belting & Supply Co. (Leather belting), 147 W. Main St., Norristown, Pa.
- ♦ Montgomery Brothers, Inc. (Packings), 45 S. Second St., Philadelphia, Pa.
- Montgomery Coal Washing & Mfg. Co. (Coal mining machinery), Box 159, Birmingham, Ala.
- Montgomery-Stewart Corp. (Steam packings), Philadelphia, Pa.
- Montgomery & Co., Inc. (Gauge glasses), 105 Fulton St., New York, N. Y.
- Monument Pottery Co., The (Porcelain baths, lavatories, etc.), Trenton, N. J.; 642 McCormick Bldg., Chicago, Ill.; 104 Broad St., New York, N. Y.; 48 Eldridge St., Newton, Mass.
- Mooers-Wright Co. (Oilers), 1400 Broadway, New York.
- Moon, George C., Co., Inc. (Wire rope), Garwood, N. J.; 124-26 White St., New York, N. Y.; Rockefeller Bldg., Cleveland, O.
- Moon Specialty Co. (Oils), 14 Dover St., New York, N. Y.
- Mooney Belting Co., The (Leather belting), 844-46 W. 6th Ave., Cincinnati, O.
- Moore Bros. (Files, auger bits, etc.), Jamestown, N. Y.
- Moore, Franklin, Co., The (Hoists, cranes, etc.), Winsted, Conn.; 50 Church St., New York, N. Y.; 34 N. Clinton St., Chicago; Stephen Girard Bldg., Philadelphia; Peoples Bank Bldg., Pittsburgh.
- Moore Drop Forging Co. (Pipe wrenches), Springfield, Mass.
- Moore, F. J. (Roof flanges), Minneapolis, Minn.
- Moore, Geo. W. (Conveying mach'y), 2144 W. Fulton St., Chicago, Ill.
- ♦ Moore, H. A., Co. (Slotting attachment), Rochester, N. Y.
- Moore-Master Mfg. Co., The (Friction clutches), 3445 N. Western Ave., Chicago, Ill.
- Moore, Joshua (Hooks), Marselles, Ill.
- Moore Oil Refining Co., The (Boiler compounds) natl. O.; Columbus, O.; Logansport, Ind.; Cambridge, O.; Chillicothe, O.; Dayton, O.; Lima, O.; Newark, O.; Portsmouth, O.; Springfield, O.; Urbana, O.; Zanesville, O.; Pittsburgh, Pa.; Charleston, W. Va.; Huntington, W. Va.
- Moore Steam Turbine Corp. (Steam engines), Wells-ville, N. Y.
- Moore Truck & Mfg. Co., The (Barrel trucks), Trenton, Mich.
- ♦ Moore & White Co., The (Power transmission mach'y, etc.), 15th St. and Lehigh Ave., Philadelphia, Pa.
- etc.), 15th St. and Lehigh Ave., Philadelphia, Pa.
- Moran Bolt & Nut Mfg. Co. (Bolts and nuts), Main and Florida Sts., St. Louis, Mo.
- ♦ Moran Flexible Steam Joint Co., Inc. (Flexible joints, etc.), 217 W. Main, Louisville, Ky.; 132 Nassau St., New York.
- More-Jones Brass & Metal Co. (Bearing metals, etc.), Broadway and Dock Sts., St. Louis, Mo.
- Morehead Mfg. Co. (Steam traps, air compressors, etc.), Warren & Grand River Ave., Detroit, Mich.
- Morency-Van Buren Mfg. Co. (Seat and tank brass goods), Sturgis, Mich.
- Morgan, C. Stanley (Felt coverings), 429 Wayne, Detroit, Mich.
- Morgan Construction Co. (Gas plants and mach'y), 15 Belmont St., Worcester, Mass.
- Morgan Engineering Co. (Traveling cranes), Alliance, O.; 120 Broadway, New York; 1216 Oliver Bldg., Pittsburgh; Peoples Gas Bldg., Chicago.
- Morgan Envelope Co., Div. United States Envelope Co. (Toilet paper and holders), Springfield, Mass.
- Morgan-Gardner Electric Co. (Coal mine machinery), 2640 Shields Ave., Chicago, Ill.
- Morgan, L. A., Co., Inc. (Barrel discharging bungs), 9 Pearl St., Brookline, Mass.
- Morgan Manfg. Co., Inc. (Hose couplings), Keene, N. H.
- Morgan-Smith Co. (Water wheels), York, Pa.; 176 Federal St., Boston.
- Morgan, Thos. E. (Dry closets), Box 542, Grand Forks, N. D.
- Morgan Vise Co. (Vises), 35 S. Desplaines St., Chicago, Ill.
- Moriarty, Gilbert J. (Copper boilers), 28 Harvard St., Boston, Mass.
- Morley Machinery Corp. (Machine tools), Rochester, N. Y.
- Morrill, Chas. (Saw sets and nail pullers), 100 Lafayette St., New York.
- (See index to advertisement, pages 7, 8 and 9.)
- Morris & Co., Inc. (Baskets and bags), Groveville, N. J.
- Morris Improved Beading Tool Co. (Beading tools), 3851 E. 46th St., Minneapolis, Minn.
- Morris, John B., Machine Tool Co., The (Lathes and drills), Court, Harriett and Vogt Sts., Cincinnati.
- Morris Machine Tool Co. (Machinery and tools), Court and Harriet Sts., Cincinnati, O.
- Morris Machine Works (Pumps and dredging mach'y), Baldwinsville, N. Y.; 39-41 Cortlandt St., New York; 217 N. Jefferson St., Chicago; Real Est. Trust Bldg., Philadelphia; Realty Bldg., Charlotte, N. C.
- Morris Metallic Packing Co. (Metallic packing), Lehigh Ave. and Mutter St., Philadelphia, Pa.
- Morris Truck & Wheel Co., Inc. (Truck wheels), 75th and Island Road, Philadelphia, Pa.
- Morris T. J. (Pipe hangers), 548 State St., Springfield, Mass.
- Morrison Bros. (Boilers, tanks, etc.), Elm and 25th Sts., Dubuque, Ia.
- Morrow Mfg. Co., The (Mining machinery), Wellston, Ohio.
- Morse, Andrew J., Son, Inc. (Fire department and diving equipment), 221 High St., Boston, Mass.
- Morse-Boulger Destructor Co. (Garbage burners), 39 Cortlandt St., New York, N. Y.
- Morse Chain Co. (Transmission chain), Ithaca, N. Y.; Atlanta; Boston; Chicago; Cleveland; Detroit; New York; Pittsburgh; St. Louis; San Francisco; Kansas City; Charlotte, N. C.; Minneapolis; Philadelphia; Montreal.
- Morse, R. F., Co. (Gauge glass preservers), 86-88 Weybosset St., Providence, R. I.
- (See index to advertisement, pages 7, 8 and 9.)
- ♦ Morse Twist Drill & Machine Co., The (Drills, reamers, etc.), New Bedford, Mass.
- Morton, F. B. (Plumbing fittings), 515 E. 31st St., Los Angeles, Cal.
- Morton Mfg. Co. (Metal working mach'y), Muskegon Heights, Mich.
- Moseley Lathe Co., The (Lathes), Elgin, Ill.
- Moss, Henry, & Co., Inc. (Steel stamps), 18 Beaver St., New York City; 131 N. 11th St., Philadelphia; 67 Fulton St., New York.
- Moss-Ochs Company (Machinists' tools), Cleveland, O.
- Mossberg, Frank, Co. (Wrenches, etc.), Lamb St., Attleboro, Mass.; 180 N. Market St., Chicago, Ill.; 626 Underwood Bldg., San Francisco; 503 Equitable Bldg., Los Angeles; 214 Maritime Bldg., Seattle, Wash.; 1129 N. Beckley St., Dallas, Texas; 461 Eighth Ave., New York, N. Y.; 332 Bleury St., Montreal.
- Motor Products & Engineering Co. (Work benches), E. 61st and Curtis Sts., Cleveland, O.
- Motor Products Corp. (Solder, copper and specialties), 441 State, Detroit, Mich.
- Motor Starter & Air Pump Co. (Air compressors), 52 Dickerson St., Newark, N. J.; 562 Book Bldg., Detroit.
- Mott, J. L., Iron Works, The, Trenton, N. J.; Chicago, Pittsburgh, St. Louis, Detroit, New Orleans, Boston, Philadelphia, Washington, Indianapolis, Atlanta, San Francisco, Montreal, Kansas City, New York, Toledo, Des Moines, Portland, Salt Lake City, Columbus, Lincoln, Neb.; St. Paul, Jacksonville, Newark, Houston, Los Angeles, Cleveland, Dayton, Seattle, Toronto, Winnipeg, El Paso, Charlotte, N. C.
- Mott Sand Blast Mfg. Co. (Sand blast machines), 24-30 S. Clinton St., Chicago, Ill.
- Mouat-Squires Co. (Vacuum heating systems), 1246-54 W. Fourth St., Cleveland, O.; 10209 Woodward, Detroit.
- Mound Tool Co. (Tools), Seventh and Hickory Sts., St. Louis, Mo.
- ♦ Mount Vernon Belting Co. (Canvas belting), 327-333 Warren Ave., Baltimore, Md.; 6522 Lafayette Ave., Chicago; 30 Church St., New York, N. Y.
- Mowell, Augustus (Automatic radiator air valves), 249 Graham Ave., Paterson, N. J.
- Mudge & Co. (Motors, sectional cars), Railway Exchange, Chicago, Ill.
- Mueller Boiler Compound Co. (Boiler compound), Minneapolis, Minn.
- Mueller, H., Mfg. Co. (Plumbing brass goods), Decatur, Ill.; 145 W. 30th St., New York.
- Mueller, L. J., Furnace Co. (Heating furnaces, etc.), 197 Reed St., Milwaukee, Wis.; 60 E. Lake St., Chicago; 426 Jefferson Ave., E., Detroit; 631 Third Ave. So., Minneapolis; 609 Panama Bldg., Portland; 1409 Olive St., St. Louis; 158 E. Fifth St., St. Paul; 410 Occidental Ave., Seattle.
- Mueller Machine Tool Co. (Drills and lathes), 2425 Colerain Ave., Cincinnati, O.
- Mulconroy Co., Inc. (Packing, hose, etc.), Parkside Station, Philadelphia, Pa.; 150 Chambers St., New York; 112 Market St., Pittsburgh; 553 W. Van Buren St., Chicago; 85 Purchase St., Boston.
- Mulherin Belt Knife Co. (Belt knives), Peabody, Mass.
- Mulholland, Wm. (Brooms and brushes), 79 White St., New York, N. Y.
- Muller, Edward (Washers, lamps), 5023 Hudson Blvd., North Bergen, N. J.
- Mullins Body Corp. (Hose connections), Stamping Dept. A., Salem, O.
- ♦ Multibestos Company (Brake linings), Walpole, Mass.; 1430 Mich. Ave., Chicago; 105 W. 63rd St., New York; 2701 Forest Ave., Kansas City; 908 Broadway, Nashville.
- Multi-Metal Separating Screen Co. (Wire cloth), 68 E. 181st St., New York, N. Y.

- Multiplex Concrete Machinery Co. (Cement block machines), Elmore, Ohio.
- Multiplex Tool Co., Inc. (Universal machine tools), 76 S. 8th St., Brooklyn, N. Y.
- Multnomah Iron Works (Steam feeds), 30th and Nicolai Sts., Portland, Ore.
- Multnomah Metal Works (Bearing metal), Portland, Ore.
- Mumdorf Chain Works (Log chain), York, Pa.
- Mummert-Dixon Co. (Grinders), 215 S. Philadelphia St., Hanover, Pa.
- Muncie Cap & Set Screw Co. (Screws), Muncie, Ind.
- Muncie Oil Engine Co. (Oil engines), Muncie, Ind.
- Mundy Hoisting Engine Co., J. S. (Hoisting engines), 722 Frelinghuysen Ave., Newark, N. J.
- Mundt, Charles, & Sons (Perforated metals), 53 Fairmount Ave., Jersey City, N. J.
- Munning, A. P., & Co. (Polishers' and platers' supplies), Matawan, N. J.; New York, Philadelphia, Chicago, Cleveland, Detroit, Rochester, Springfield, Mass.
- Munroe, R., & Sons Mfg. Corp. (Boilers, tanks, etc.), 23d and Smallman Sts., Pittsburgh, Pa.
- Munson Mill Machinery Co., Inc. (Water wheels), 405 Broadway, Utica, N. Y.
- ◆ Murchey Machine & Tool Co. (Threading mach'y), 951 Porter St., Detroit, Mich.; 1625 Williamson Bldg., Cleveland; 99 Warren St., New York.
- Murdoch, H., & Co. (Bearing metal), 432 Wood St., Pittsburgh, Pa.
- Murdock Mfg. & Supply Co., The (Hydrants and drinking fountains), 426-430 Plum St., Cincinnati, O.
- Murphy Iron Works (Automatic stokers), 9 Walker St., Detroit, Mich.; 233 Broadway, New York.
- Murphy Metals Co. (Bearing metals), 2837 S. Halsted St., Chicago, Ill.
- Murphy Specialty Co. (Plumbing specialties), 90 Second St., Milwaukee, Wis.
- Murphy & Walsh (Steel tanks), Pekin, Ill.
- Murray Iron Works Co., The (Steam engines and boilers), Burlington, Ia.
- Murray Specialty Mfg. Co. (Steam specialties), 315 W. Woodbridge St., Detroit, Mich.
- Murrie & Ott (Turning tools), La Crosse, Wis.
- Muskegon Boiler Works (Boilers, etc.), Western Ave., betw. 7th and 8th Sts., Muskegon, Mich.
- Muskegon Machine Co. (Woodworking mach'y), Muskegon, Mich.
- Mustee Heater Co. (Water heaters), 3409 Superior Ave., Cleveland, O.
- Mutual Machine Co. (Universal joints), 27 Wells St., Hartford, Conn.
- Mutual Supply Co., The (Valves), 87 Pennsylvania Ave., Newark, N. J.
- Muzzy-Lyon Co. (Bearing metal), 535 Larned St., Detroit, Mich.
- Myers Machine Tool Corp. (Lathes, grinders, etc.), Second and Chestnut Sts., Columbia, Pa.; 90-92 West Broadway, New York.
- Myers, F. E., & Bro. Co. (Pumps), Ashland, O.; Harrisburg, Pa.; Milwaukee; Cedar Rapids; St. Louis; Albany.
- (See index to advertisement, pages 7, 8 and 9.)
- Myers, W. F., Co., Inc. (Eccentric chucks), Bedford, Ind.; 10 S. La Salle St., Chicago.
- Myers, W. R., Mfg. Co. (Kerosene water heaters), 2302 Roscoe St., Chicago, Ill.
- ◆ Nagel-Chase Mfg. Co., The (Gasoline lighting systems, etc.), 254 E. Erie St., Chicago, Ill.
- Nageldinger, J., & Son (Air pressure regulators), 407 E. 91st St., New York, N. Y.
- Nagle Engine & Boiler Works (Engines and boilers), Erie, Pa.
- Naperville Machine Co., Inc. (Power presses), Naperville, Ill.
- ◆ Napier Saw Works, Inc. (Saws), Middletown, N. Y.
- Narragansett Belting Co. (Leather belting), 68 W. Exchange St., Providence, R. I.
- Nash, George, Co. (Tool steel), 304-308 Hudson St., New York, N. Y.; 1455 West 37th St., Chicago.
- Nash Engineering Co. (Compressors and pumps), South Norwalk, Conn.
- Nash, J. M. (Sanding machines), 844 30th St., Milwaukee, Wis.
- Nashua Steam Press & Boiler Works (Presses and pumps), Nashua, N. H.
- Nason Mfg. Co. (Steam specialties), 71 Fulton St., New York, N. Y.; 82 Davis St., Long Island City, N. Y.
- (See index to advertisement, pages 7, 8 and 9.)
- Nassau Pump & Valve Co. (Pumps and valves), Rockville Centre, N. Y.
- Nathan Mfg. Co. (Engine room specialties), 21 East 40th St., New York, N. Y.; 20 W. Jackson, Chicago.
- National-Acme Co., The (Screws, etc.), East 131 St. & Colt Road, Cleveland, O.; 141 Milk St., Boston; 1834 Majestic Bldg., Detroit; 559 W. Wash. Blvd., Chicago; 988 Ellicott Sq. Bldg., Buffalo; 77 White St., New York.
- National Asbestos Mfg. Co. (Pipe and boiler covering), 163-193 Henderson St., Jersey City, N. J.
- National Auto Specialty Mfg. Co., The (Valve reseat-ing machines), Tama, Ia.
- National Automatic Tool Co. (Drilling machines), Richmond, Ind.
- National Blow Pipe & Mfg. Co., Ltd., The (Fans, blow and exhaust piping), New Orleans, La.
- National Boiler Protector Co. (Boiler seam protectors), 740 Reibold Bldg., Dayton, O.
- National Boiler Washer Co. (Boiler washers), Railway Exchange, Chicago, Ill.
- National Bolt & Nut Co. (Nuts and bolts), 62d St. and A. V. R.R., Pittsburgh, Pa.; 50 Church St., New York; 89 E. Jackson Blvd., Chicago; 214 N. 6th St., St. Louis.
- National Brake & Electric Co. (Air compressors), foot Bellevue Pl., Milwaukee, Wis.; Atlanta, Chicago, Denver, Los Angeles, Pittsburgh, St. Louis, San Francisco, Boston, Columbus, Houston, New York, Portland, St. Paul, Mexico City.
- National Brass Mfg. Co. (Plumbing brass goods), 191-199 Mill St., Rochester, N. Y.
- National Cast Iron Pipe Co. (Pipes), Birmingham, Ala.
- National Chain Company (Chains), Marietta, O.
- National Conduit & Cable Co., Inc. (Copper wire), Hastings-on-Hudson, New York; Boston, Chicago, New York, San Francisco.
- National Copper & Smelting Co. (Tubing), 1895 Colman Rd., Cleveland, O.
- National Cutlery Co., The (Shears, etc.), Westmoreland and Boudinot Sts., Philadelphia, Pa.
- National Drawn Steel Co., The (Cold drawn steel), East Liverpool, O.
- National Dry Kiln Co., The (Dry kilns, boilers, etc.), 1118 E. Maryland St., Indianapolis, Ind.
- National Enameling & Stamping Co., Inc. (Steel sinks), 411 Fifth Ave., New York, N. Y.; St. Louis, Milwaukee, Baltimore, Chicago, Philadelphia, Granite City, Ill.; New Orleans.
- National Engineering Co. (Gas engines and wood tanks), Saginaw, Mich.
- National Engineering & Tool Works (Lathes), Oak Park, Ill.
- National Flue Cleaner Co. (Flue cleaners), Groveville, N. J.
- National Forge & Tool Co. (Forged tools), Irvine, Warren Co., Pa.
- National Foundry Co. (Pipe and fittings), 12 Sanford St., Brooklyn, N. Y.
- National Foundry & Machine Co. (Presses), Ypsilanti, Mich.
- National Foundry, Mfg. & Supply Co. (Power transmission mach'y), Williamsport, Pa.
- National Gas Furnace Co. (Gas furnaces), Providence, R. I.
- National Gauge Co. (Gauges, counters, etc.), 300 Pacific St., Brooklyn, N. Y.
- National Gauge & Equipment Co. (Pressure gauge), La Crosse, Wis.; 51 E. 42d St., New York, N. Y.; 1209 Kresge Bldg., San Francisco, Cal.; 80 E. Jackson Blvd., Chicago.
- (See index to advertisement, pages 7, 8 and 9.)
- National Gas Governor Co., The (Gas regulators), 4 Church St., New York, N. Y.; Park Bldg., Cleveland; 65 Union Bldg., Detroit; Metropolitan Bldg., Minneapolis; Cutler Bldg., New Haven; Bulletin Bldg., Philadelphia; Railway Exchange Bldg., Portland, Ore.; Cray Bldg., Seattle; 135 Kearney St., San Francisco; Munsey Bldg., Washington, D. C.
- National Graphite Lubricator Co. (Lubricator), Scranton, Pa.
- National Grinding Wheel Co. (Grinding wheels), 2934 Main St., Buffalo, N. Y.
- National Handle Co., The (Wood handles), Frankfort, Ind.
- National Hoisting Engine Co. (Hoisting engines), Harrison, N. J.
- National Lead Co. (Lead products), 111 Broadway, New York, N. Y.; Boston; Buffalo; Cleveland; Chicago; Chestnut St., St. Louis; 7th St. and Freeman, Cincinnati; Philadelphia; San Francisco.
- National Lathe Co. (Lathes), 15 W. 2d St., Cincinnati, Ohio.
- National Leather Belting Co. (Leather belting), 342 E. 38th St., New York, N. Y.
- National Leather Preservative Co. (Belt dressing), 3642 Wentworth Ave., Chicago.
- National Light & Heating Co., The (Acetylene gas generators), Freeport, O.
- National Lock Washer Co. (Lockwashers), Newark, N. J.; 14 E. Jackson Blvd., Chicago, Ill.; 1503 Kresge Bldg., Detroit; 50 Church St., New York.
- National Machine Tool Co. (Key seating millers), 2272 Spring Grove Ave., Cincinnati, O.
- National Machinery Co. (Bolt and nut mach'y), Tiffin, O.
- National Magnesia Mfg. Co. (Pipe covering), 544 Market St., San Francisco, Cal.
- National Malleable Castings Co. (Malleable castings), 7706 Platt Ave., S.E., Cleveland, O.; Chicago; Indianapolis; Toledo.
- National Marine Lamp Co. (Marine lamps), Forrestville, Conn.; 354 Pearl St., New York, N. Y.; 41 Spear St., San Francisco.

- National Metal Products Co. (Vises), Indianapolis, Ind.
- National Metal Spinning & Stamping Co. (Metal stampings), 176-180 Grand St., New York, N. Y.
- National Metallic Packing Co., The (Packings), Oberlin, O.
- National Meter Co. (Water meters), 299 Broadway, New York, N. Y.; 2626 S. Park Ave., Chicago; 415 Sycamore St., Cincinnati; 287 Atlantic Ave., Boston; 251 Ivy St., Atlanta; 141 New Montgomery St., San Francisco; Winnipeg.
- National Packaging Machinery Co. (Automatic machinery), 172-178 Green St., Jamaica Plain, Boston, Mass.; 20 E. Jackson Blvd., Chicago.
- National Paper Products Co. (Paper towels), Carthage, N. Y.
- National Pipe Bending Co., The (Feed water heaters, etc.), 117 Lloyd St., New Haven, Conn.; 54 High St., Boston; 149 Broadway, New York.
- National Pipe & Foundry Co. (Soll pipe), Attalla, Ala.
- National Products Co. (Steel tanks, crayons, etc.), East Liverpool, O.
- National Radiator Co. (Radiators and boilers), Johnstown, Pa.; 1825 Arch St., Philadelphia; 1858 Broadway, New York; Builders' Exchange, Baltimore, Md.; 1228 H St., N. W., Washington, D. C.; 216 Wood St., Pittsburgh, Pa.; 1835 E. 13th St., Cleveland; 810 Graham Road, Richmond, Va.
- National Refining Co., The (Oils), Cleveland, O.
- National Regulator Co. (Regulators), 208 S. Jefferson St., Chicago, Ill.; 145 E. 34th St., New York; Los Angeles; Philadelphia.
- National Roofing & Paint Co. (Prepared roofing), North Tonawanda, N. Y.; 6318 Kinsman Road, Cleveland; 1353 Michigan Ave., Detroit; 607 Publication Bldg., Pittsburgh, Pa.
- National Roll & Foundry Co. (Steel mill machinery), Avonmore, Pa.
- National Rubber & Specialties Co. (Brazing forges), 4433-39 Chickering Ave., Winton Pl., Cincinnati, O.
- National Sales Engineering Co. (Drill jig system), 703 Kresge Bldg., Detroit, Mich.
- National Sanitary Co., The (Enameled plumbing fixtures), Salem, O.
- National Scale Co. (Scales and trucks), Chicopee Falls, Mass.; 366 S. Wabash Ave., Chicago.
- ♦ National Screw & Tack Co., A. B. Products Div. (Cotters), E. 40th and Payne Ave., N. E., Cleveland, O.; 326 W. Madison St., Chicago.
- National Separator & Machine Co. (Oil filters and separators), 739 Boylston St., Boston.
- National Standard Co. (Blowers, pumps, etc.), Niles, Mich.
- National Steam Pump Co. (Steam pumps, etc.), Upper Sandusky, O.; 11 N. Franklin St., Chicago.
- National Steel Tank & Mfg. Co. (Tanks), Bradford, Ill.
- National Stove Co., Div. American Stove Co., Lorain, O.; 825 Chouteau Ave., St. Louis, Mo.; 715 Indiana Ave., San Francisco; Los Angeles; Portland.
- National Supply Co. (Furnaces, etc.), 412 Orleans St., Chicago, Ill.
- National Tool Co., The (Milling cutters, etc.), West 112th St., Cleveland, O.; 24 S. Jefferson St., Chicago, Ill.; 36 Murray St., New York; 1215 Filbert St., Philadelphia; 610-11 Sun Bldg., Detroit; 34 S. Forsyth St., Atlanta; 1125 Gasco Bldg., Portland.
- National Tool Co. (Plumbers' tools), 86 Walker St., New York.
- National Transit Pump & Machine Co. (Gas engines, pipe fittings), Oil City, Pa.; 30 Church St., New York; Widener Bldg., Philadelphia; Reliance Bldg., Kansas City, Mo.; Farmers Bank Bldg., Pittsburgh; Park Bldg., Cleveland; Foster Bldg., Denver; Mason Bldg., Houston, Texas.
- National Tube Company (Pipe, boiler tubes, seamless steel tubing), Frick Bldg., Pittsburgh, Pa. District sales offices: Atlanta, Boston, Chicago, Denver, New Orleans, New York, Philadelphia, Pittsburgh, Salt Lake City, St. Louis, St. Paul, Pacific Coast representatives: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle. Export representatives: U. S. Steel Products Co., New York, N. Y.
- ♦ National Twist Drill & Tool Co. (Twist drills, etc.), Brush and E. Grand Blvd., Detroit, Mich.; Chicago; New York; Philadelphia; Syracuse.
- National Utilities Corp. (Water systems), Milwaukee, Wis.
- National Valve & Mfg. Co. (Valves and fittings), 31st St. and Liberty Ave., Pittsburgh, Pa.; Guardian Bldg., Cleveland, O.; Bulletin Bldg., Philadelphia; Candler Bldg., Atlanta, Ga.; Cortlandt Bldg., New York.
- National Water Lift Co. (Water lifts), Kalamazoo, Mich.
- National Weighing Machine Co. (Feed water weighers), Springfield, O.
- Naugatuck Mfg. Co. (Copper floats, etc.), Naugatuck, Conn.
- Naylor Bros. (Power transmission mach'y), Peekskill, N. Y.; 95 Liberty St., New York, N. Y.
- Nazel Engineering & Machine Works (Power hammers), 4041 N. 5th St., Philadelphia, Pa.
- Neal, B. B. Hardware Co. (Water coolers, shovels and hacksaws), 117-119 Leonard St., New York.
- ♦ Neely Nut & Bolt Co. (Nuts), S. 22d St. and Merrimac St., Pittsburgh, Pa.
- Neemes Bros. (Grates and mach'y castings), 30 First St., Troy, N. Y.
- Neider, F. A., Co., Inc. (Nails), Augusta, Ky.
- Neil & Smith Electric Tool Co., The (Electric grinders, etc.), 813-815 Broadway, Cincinnati, O.
- Nelson-Blanch Mfg. Co. (Drill heads), 7742 Dubois St., Detroit, Mich.
- Nelson Bros. Co. (Gas engines), Saginaw, Mich.
- Nelson, L. R. (Lawn sprinklers and hose sprinklers), 1725 S. Washington St., Peoria, Ill.
- Nelson Mfg. & Supply Co. (Steel tanks and pumps), Hutchinson, Kan.
- Nelson, N. O., Mfg. Co. (Plumbing goods), (Plant at Bessemer, Ala.), Tenth and Chestnut Sts., St. Louis, Mo.; Pueblo, Colo.; Los Angeles; San Francisco; Salt Lake City.
- Nelson Rivet Co. (Rivets), Taunton, Mass.
- Nelson Tool Co., Inc. (Stamping dies), 781-783 E. 142d St., New York, N. Y.
- Nelson Tool & Machine Co. (Universal angle fixtures), 253 Norfolk St., Newark, N. J.
- Nelson Valve Co. (Valves), Chestnut Hill, Philadelphia, Pa.; 30 Church St., New York; 650 W. Lake St., Chicago.
- Neptune Meter Co., The (Water meters), 50 East 42nd St., New York, N. Y.; Chicago, San Francisco, Cincinnati, Los Angeles, Portland.
- Neptunus Supply Co. (Boiler water testers), 73 Front St., New York.
- Nestor Mfg. Co., Inc. (Drill press vises), 38-40 W. 18th St., New York, N. Y.
- Neuman-Warnock Co. (Radiator bushings), 119 Front St., Beaver Dam, Wis.
- Neu Metal Products Corp., Specialty Mfg. (Solder), Binghamton, N. Y.
- Neumeyer, H. F. (Yard hydrants, etc.), Macungie, Pa.
- Neverslip Works (Wrenches and pliers), New Brunswick, N. J.
- Never-Split Seat Co. (Plumbers' woodwork), 71 Pierpont St., Brooklyn, N. Y.; 822 Monadnock Bldg., San Francisco; Evansville, Ind.
- Neville Mfg. Co. (Folding scaffolding), 211 N. Tremont St., Kewanee, Ill.
- New Advance Machinery Co. (Glue room mach'y), Van Wert, O.; Boston, New York, Chicago, Detroit, Pittsburgh, Cleveland, San Francisco.
- New Albany Mfg. Co. (Grates), New Albany, Ind.
- New Bedford Boiler & Machine Co. (Valves), New Bedford, Mass.
- New Bedford Valve Mfg. Co. (Extra heavy valves), New Bedford, Mass.
- New Bern Flue Cleaner Co. (Flue cleaners), New Bern, N. C.; 417 Franklin Bank Bldg., Philadelphia, Pa.
- New Britain Machine Co. (Mach'y, etc.), New Britain, Conn.; 4610 Woodward Ave., Detroit, Mich.; 812 Engineers Bldg., Cleveland, O.; 1120 Otis Bldg., Chicago, Ill.; New York; Philadelphia; San Francisco.
- New Departure Mfg. Co., The (Ball bearings, etc.), Bristol, Conn.; 3044 W. Grand Blvd., Detroit, Mich.; 122 S. Michigan Ave., Chicago.
- New Doty Mfg. Co. (Punching and shearing machines), Jonesville, Wis.
- New England Bolt Co., Inc. (Bolts, etc.), Everett, Mass.
- New England Buff Co. (Polishing wheels), Boston, Mass.
- New England Machinery Co. (Machines), New Haven, Conn.
- New England Mfg. Co. (Acetylene gas generators), 38 S. Dearborn St., Chicago, Ill.; 341 Broadway, New York.
- New England Novelty Works (Gage glass cutters), Hill, N. H.
- New England Pressed Steel Co. (Wrenches), Natick, Mass.
- New England Roller Grate Co. (Grates), Indian Orchard, Mass.; Boston, Indianapolis.
- New England Screw Co. (Screws and washers), 44 Farnsworth St., Boston, Mass.
- New England Steam Gauge Co. (Steam gauges, etc.), Penn Ave., Niantic, Conn.
- New England Ventilating & Heating Co. (Fans and blowers), 928 Manton Ave., Providence, R. I.
- New Era Mfg. Co. (Bearing metal, etc.), Cobb Ave., Kalamazoo, Mich.
- New Haven Copper Co. (Sheet copper), Seymour, Conn.
- New Haven Rivet Co., The, 30-32 Webster St., New Haven, Conn.
- New Haven Sand Blast Co., The (Sand blast machines), New Haven, Conn.
- New Haven Screw Co. (Screw machine products), 191 Foster St., New Haven, Conn.
- New Holland Machine Co. (Sawing outfits), New Holland, Pa.

- New Jersey Asbestos Co. (Packings), 1 Water St., New York, N. Y.
- New Jersey Car Spring & Rubber Co., Inc. (Hose and belting), Jersey City, N. J.; Chicago; New York; Pittsburgh; Philadelphia.
- New Jersey Foundry & Machine Co. (Expansion bolts), 90 West St., New York, N. Y.
- New Jersey Nipple & Machine Works (Pipe nipples), 54 Belmont Ave., Newark, N. J.
- New Jersey Tube Co. (Plumbing brass goods), Harrison, N. J.
- New London Ship & Engine Co. (Oil engines), Groton, Conn.
- New London Vise Works (Vises, etc.), New London, Conn.
- New Milford Foundry & Machine Co. (Heating boilers), New Milford, Conn.
- New Process Roofing & Supply Co. (Acetylene gas generators, metal roofing, etc.), Dallas, Texas.
- New Process Twist Drill Co. (Drills, etc.), Taunton, Mass.
- New Specialty Mfg. Co., The (Gas lamps and mantles), 41-47 N. Main St., Council Bluffs, Ia.
- "New-Way" Motor Co., The (Gasoline engines), Lansing, Mich.
- New York Air Brake Co., The (Air compressors), 165 Broadway, New York, N. Y.; Atlanta; Buffalo; Chicago; Portland; Salt Lake City.
- New York Bearings Co., Inc. (Ball bearings), 311 West 59th St., New York.
- ♦ New York Belting & Packing Co., Ltd. (Belting, hose, packing), 91-93 Chambers St., New York, N. Y.; 821 Arch St., Philadelphia; 124 W. Lake St., Chicago; 519 Mission St., San Francisco; 218 Chestnut St., St. Louis; 65 Pearl St., Boston; 420 1st Ave., Pittsburgh; Felt Bldg., Salt Lake City.
- New York Blower Co., The (Blowers, engines, etc.), Bucyrus, O.; Archer Ave. and Canal St., Chicago; E. Orange, N. J.; Cleveland, O.; Minneapolis.
- New York Central Iron Works Co. (Tanks, boilers, etc.), Hagerstown, Md.; 20 Union St., Boston.
- New York Continental Jewell Filtration Co. (Water filters), Nutley, N. J.; 111 W. Monroe St., Chicago; Montreal.
- New York Cordage Co., The (Rope, oakum, etc.), 113-115 Spring St., New York, N. Y.
- New York Engine Co. (Steam engines, etc.), 165 Broadway, New York, N. Y.
- New York Gas Tubing Co. (Gas tubing), 97 Bank St., New York, N. Y.
- New York Leather Belting Co. (Belting), 428-30 Broadway, New York.
- New York Lubricating Oil Co. (Oil cups), 116 Broad St., New York, N. Y.; Boston; Philadelphia; Portland, Ore.; Los Angeles; Omaha; Pendleton, Oregon; San Francisco; Seattle; Spokane.
- New York Metal Ceiling Co. (Metal Ceilings, etc.), 537-541 W. 24th St., New York, N. Y.
- New York & New Jersey Lubricant Co. (Lubricants), 401 Broadway, New York, N. Y.; Atlanta; Charlotte, N. C.; Greenville, S. C.; New Orleans.
- New York Oil Cabinet Co., The (Oil cabinets), 103 Walker St., New York, N. Y.
- New York Radiator Co. (Radiators), Utica, N. Y.; 29 W. 42nd St., New York; Columbus; Dallas.
- New York Revolving Portable Elevator Co. (Portable elevators), 344-352 Garfield Ave., Jersey City, N. J.
- New York Rubber Co. (Belting, hose, etc.), 84-86 Reade St., New York, N. Y.; 325 W. Randolph St., Chicago; 805 Franklin Ave., Houston, Tex.
- New York Slate Works, The (Plumbers' slate), 255 E. 138th St., New York, N. Y.
- New York Rubber Disc Co. (Rubber washers), 215 E. 98th St., New York, N. Y.
- New York Washer Works (Washers), 89 Morton St., New York, N. Y.
- New York Wheelbarrow Co. (Wheelbarrows), 70 Warren St., New York, N. Y.
- Newark Brass Works (Plumbers' brass goods), Newark, N. J.
- Newark Brush & Scraper Co. (Brushes and scrapers), 264-266 Fabian Pl., Newark, N. J. Mr. D. C. Andrews, 206 Broadway, New York, N. Y.
- Newark Fire Proof Sash & Door Co. (Laundry tray covers), Newark, N. J.
- Newark Gear Cutting Machine Co. (Gear cutting mach'y), 69 Prospect, Newark, N. J.
- Newark Oil Burning Devices Co. (Oil burners), 78 William St., Newark, N. J.
- Newark Stamping & Foundry Co. (Hose clamps), Newark, O.
- Newark Wire Cloth Co. (Wire cloth), 228 Verona Ave., Newark, N. J.
- Newbury Mfg. Co. (Pipe fittings and specialties), Monroe, N. Y.
- Newbury, Jay, & Son (Pipe fittings and specialties), Spring St., Goshen, N. Y.
- Newhall Chain Forge & Iron Co. (Welded chain), 90 West St., New York, N. Y.; 17 North St., Philadelphia; 156 Second St., San Francisco.
- Newman Clock Co., Inc. (Clocks), 428 Broadway, New York; 565 Washington Blvd., Chicago, Ill.
- Newman Electric Lamp Co. (Electric lamps), 717-21 Sycamore St., Cincinnati, O.; 101 4th Ave., New York.
- Newman Machine Co. (Woodworking mach'y), Greensboro, N. C.
- Newman Mfg. Co. (Brass railings, grills, rotary multiple lathe chuck and multiple tool heads), 719 Sycamore St., Cincinnati, O.; 101 4th Ave., New York; 68 W. Washington St., Chicago, Ill.
- Newport Boiler Co. (Heating boilers), 106 S. Dearborn St., Chicago, Ill.
- Newport Culvert Co., The (Culverts), Newport, Ky.
- Newport Rolling Mill Co. (Iron and steel plates), Newport, Ky.
- Newton Falls Mfg. Co., The (Mallets), Newton Falls, O.
- Newton Machine Tool Works, Inc. (Metal working mach'y, 23rd and Vine Sts., Philadelphia, Pa.
- Niagara Brass Corporation (Brass nuts and screws), Lockport, N. Y.
- Niagara Emery Mills, Inc. (Emery), 50 Broad St., New York City.
- Niagara Falls Gasket & Packing Co. (Packings), 50 Church St., New York.
- Niagara Metal Stamping Corp. (Tool checks), 235-47 Tenth St., Niagara Falls, N. Y.
- Niagara Hydraulic Engine Co. (Hydraulic engines), Chester, Pa.
- Niagara Machine & Tool Works (Sheet metal mach'y), 683 Northland Ave., Buffalo, N. Y.
- Niagara Mfg. Co. (Closet seats), 1042 Ridge Ave., Philadelphia, Pa.
- Niagara Motors Corp. (Gasoline Motors), Dunkirk, N. Y.
- Niagara Radiator & Boiler Company (Radiators and boilers), North Tonawanda, N. Y.; 160 Fifth Ave., New York.
- Niagara Screw Co. (Screws, nuts and bolts), 20 Lock St., Buffalo, N. Y.
- Niagara Sprayer Co. (Spraying machinery), Middleport, N. Y.
- Nicetown Plate Washer Co. (Washers), 1824 Juniata St., Philadelphia, Pa.
- Nichol, Thos. J. & Co. (Pipe fittings and specialties), Pearl and Ludlow Sts., Cincinnati, O.
- Nicholls Mfg. Co. (Mitre boxes), Ottumwa, Ia.
- Nicholls, Wm. H. Co., Inc. (Molding machines), 2 College Pl., Brooklyn, N. Y.
- Nicholls, Wm. S. (Portable cranes, etc.), Hoosick Falls, N. Y.
- Nichols Power Co., Inc. (Gas and oil engines, etc.), Stamford, Conn.
- Nichols & Shepard Co. (Threshing machinery), Battle Creek, Mich.; Billings, Mont.; Des Moines; Fargo; Indianapolis; Kansas City; Lincoln; Madison; Battle Creek; Minneapolis; Nashville; Peoria; Regina; Winnipeg.
- Nicholson, W. H. & Co. (Engine room specialties), 1300 Oregon St., Wilkesbarre, Pa.
- ♦ Nicholson File Co. (Files), Providence, R. I.
- ♦ Niedner's Chas., Sons Co. (Fire hose), Malden, Mass.
- Nielson-Barton Chuck Co. (Drill chucks), 106 S. Jefferson St., Chicago, Ill.
- Night Commander Lighting Co. (Generators), Jackson, Mich.
- Niles-Bement-Pond Co. (Mach'y), 111 Broadway, New York, N. Y.; Oliver Bldg., Boston; 21st and Callowhill Sts., Philadelphia; Frick Bldg., Pittsburgh; 573 Washington Blvd., Chicago; 516 N. 3d St., St. Louis; Brown-Marx Bldg., Birmingham.
- Niles Steel Tank Co. (Tanks), Niles, Mich.
- Nilson, A. H., Machine Co., The (Mach'y), Bridgeport, Conn.
- Nixon Mining Drill Co. (Mining drills), Chattanooga, Tenn.
- No-Dust Drying Machine Co. (Metal dryers), 159 Dorance St., Providence, R. I.
- Noble, F. H., & Co. (Silver solder), 555 W. 59th St., Chicago, Ill.; 29 E. Madison St., Chicago; 15 Maiden Lane, New York City.
- Noble Machine Co. (Cooperage machinery), 902 Hayden Ave., Ft. Wayne, Ind.
- Noble & Westbrook Mfg. Co., The (Marking machines), Hartford, Conn.
- Noera Mfg. Co. (Oilers), 85 Griggs St., Waterbury, Conn.
- Nolan & Blen (Vehicle washers), 53 Cambridge St., Boston, Mass.
- Nold Valve Reseating Tool Co. (Tools), 500 Fraser St., Bay City, Mich.
- Nolu Oilless Bearing Co. (Shaft bearing), 6 E. Johnson St., Germantown, Philadelphia, Pa.
- Nopak Brass Mfg. Co. (Bibbs), Du Bois, Pa.; 527 Perry Bldg., Philadelphia.
- Norborn Engineering Co., The (Dredging mach'y), Denckla Bldg., Philadelphia, Pa.
- Nordberg Mfg. Co. (Steam engines), Oklahoma Ave. and Chicago Road, Milwaukee, Wis.
- Nordyke & Marmon Co. (Mach'y and power transmission specialties), 1131 W. Morris St., Indianapolis.
- Norfolk Mfg. Co., The (Clamps, screws, vises), Norfolk, Conn.
- Norjo Mfg. Co. (Concrete inserts), St. Louis, Mo.
- Norma Co. of America, The (Ball bearings), Anable Ave., Long Island City, N. Y.

Norman, C. Erwin, & Co. (Brackets, hangers, etc.), 18 W. Kinzie, Chicago, Ill.  
 Norrish Burnham & Co. (Power transmsn. mach'y), Glen Rock, Pa.  
 Norris Brothers, Inc. (Oil well supplies), Robinson, Ill.  
 Norris, W. C. (Oil pumping supplies), Frisco Ry. and N. Frisco Ave., Tulsa, Okla.  
 Norristown Magnesia & Asbestos Co. (Asbestos), Norristown, Pa.; 23 Lewis Wharf, Boston.  
 North American Copper Co. (Copper, etc.), 52 Vanderbilt Ave., New York, N. Y.  
 North American Engine Co. (Gasoline section cars), Algona, Ia.  
 North American Handle Co. (Handles), 174 Portland St., Boston, Mass.  
 North American Mfg. Co., The (Blow torches), 5902 Carnegie Ave., Cleveland, Ohio.  
 North American Smelting Co. (Lead pipe, etc.), 900 W. Thompson St., Philadelphia, Pa.  
 North Bros. Mfg. Co. (Small tools), American St. and Lehigh Ave., Philadelphia, Pa.  
 North Coast Dry Kiln Co. (Dry kilns and lumber stackers), 15th W. and Newton Sts., Seattle, Wash.  
 North Penn Washer Co. (Washers), Drexel Bldg., Philadelphia, Pa.  
 North Side Leather Belting Co., Inc. (Leather belting), 248 Lorimer St., New York, N. Y.  
 North Side Tool Co., The (Amplifying gages), Dayton, Ohio.  
 North Star Foundry Co. (Metals and plumbers' specialties), 32d Ave. and 27th St., Minneapolis, Minn.  
 Northern Blower Co., The (Blower systems), 6409 Barborton Ave., Cleveland, O.  
 Northern Brass Mfg. Co. (Bibs and cocks), Waukegan, Ill.  
 Northern Engineering Works (Hoists, cranes, etc.), 210 Chene St., Detroit, Mich.  
 Northern Equipment Co. (Feed water regulators), Erie, Pa.  
 Northern Fire Apparatus Co. (Fire extinguishers), 2418 University Ave., Minneapolis, Minn.  
 Northern Metallic Packing Co. (Locomotive specialties), 540-542 Rice St., St. Paul, Minn.  
 Northern Tool Co., Inc., the (Water gauges, etc.), 806 Union St., Utica, N. Y.  
 Northern Water Softener Co. (Water softeners), Madison, Wis.; 501 Iron Blk., Milwaukee; 37 S. Monmouth St., Dayton, O.; 205 S. Robert St., St. Paul, Minn.; 235 Balboa Bldg., San Francisco, Cal.  
 Northrop Lubricating Oil Co. (Boiler compounds), St. Louis, Mo.  
 Northwestern Bar Wire Co., Inc. (Wire and wire products), Sterling, Ill.  
 Northwest Lead Co. (Lead pipe, etc.), 1744 4th Ave., So. Seattle, Wash.; Mills Bldg., San Francisco; Higgins Bldg., Los Angeles; Paulsen Bldg., Spokane, Wash.  
 Northwestern Chemical Co., The (Fire extinguishers, etc.), 627 State St., Marietta, O.  
 Northwestern Fire Extinguisher Co. (Fire extinguishers), 2418-22 University Ave., S. E., Minneapolis, Minn.  
 Northwestern Motor Co. (Factory trucks, marine engines), 759 Spring St., Eau Claire, Wis.  
 Northwestern Steel & Iron Works, Eau Claire, Wis.  
 Nortmann-Duffke Co. (Perforated metals), 1240 27th Ave., Milwaukee, Wis.  
 Norton, A. O., Inc. (Jacks), 440 Brookline, Boston 17 Mass.  
 Norton Co. (Grinding wheels), Worcester, Mass.; 11 N. Jefferson St., Chicago; Bulletin Bldg., Philadelphia; 233 W. Congress St., Detroit; 206 Keith Theatre Bldg., Syracuse; 151 Chambers St., New York; 422 Engineers Bldg., Cleveland; 49 Pearl St., Hartford.  
 Norton Water Motor Co., Inc. (Water motors), Roslindale, Mass.; 29 Central St., Boston.  
 Norwalk Drilling Tool Co. (Oil well supplies), Norwalk, O.  
 Norwalk Iron Works Co., The (Air compressors), South Norwalk, Conn.  
 Norwalk Mfg. Co., The (Metal and rubber specialties), East Norwalk, Conn.  
 Norwood Engineering Co. (Fire hydrants, paper mill mach'y, etc.), Florence, Mass.  
 Nott, W. S., Company (Leather belting), Second Ave., North and Third Sts., Minneapolis, Minn.; 37 S. Clinton St., Chicago, Ill.; 40 1st St., Portland; Spokane.  
 Novelty Iron Works Co. (Blacksmiths' machines), Dyersville, Ia.  
 Novelty Mfg. Co., The (Bathroom fittings), Waterbury, Conn.; 200 Fifth Ave. Bldg., New York; 604 Mission St., San Francisco.  
 Novelty Mfg. Co. (Gas heaters), Jackson, Mich.  
 Novelty Turning Co. (Wooden handles), 34 Main, Norway, Me.  
 Novo Engine Co. (Gas engines), 702 Porter St., Lansing, Mich.; 800 Old Colony Bldg., Chicago, Ill.; 1617 Woolworth Bldg., New York, N. Y.  
 Noyes, B. B., Co., Inc. (Drills, etc.), Greenfield, Mass.  
 Nubian Paint & Varnish Co., The (Radiator enamels, etc.), 1856 Leclaire Ave., Chicago, Ill.

Nu-Ex Fire Appliance Co. (Fire extinguishers), Columbus, O.  
 Nugent, Thomas (Heating specialties), 223 E. 80th St., New York City.  
 Nugent, Wm. W. & Co. (Oilers), 410 N. Hermitage Ave., Chicago, Ill.; New York; Pittsburgh.  
 Nuhring, Chas., Bro. (Fire extinguishers, etc.), 1212 Walnut St., Cincinnati, O.  
 Nunn Brass Works (Oil cups, W. C. combinations), 17 Wentworth St., Rochester, N. Y.  
 Nurre Mirror Plate Co., The (Medicine cabinets), Bloomington, Ind.  
 Nusbaum, F. A. (Pipe clamps, oil filters), 219 N. Ruffner St., Lockland, O.; 622 N. High St., Columbus, O.  
 Nustone Products Corp. (Laundry tubs), 405 Lexington Ave., New York.  
 Nute, McGehee, Geary Co., Inc. (Grates and flue cleaners), Chambersburg, Pa.  
 Nuttall, R. D., Co. (Gears), Candless and Harrison Sts., Pittsburgh, Pa.  
 Nutting Truck Co. (Factory trucks and elevators), Faribault, Minn.  
 Nye Steam Pump & Mach'y Co. (Steam pumps), 701 North Western Ave., Chicago, Ill.  
 Nye Tool & Machine Works (Pipe threading mach'y), 108-128 N. Jefferson St., Chicago, Ill.; 25 W. 42d St., New York.

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O. E. Specialty Mfg. Co. (Vacuum valves), 884 Third St., Milwaukee, Wis.  
 O. & S. Bearing Co. (Bearings), 315 S. Artillery Ave., Detroit, Mich.  
 Oakley Chemical Co. (Compounds), 24 Thames St., New York, N. Y.  
 Oakley & Jansen Machinery Co. (Woodworking mach'y), Parkersburg, W. Va.  
 Oakley Machine Tool Co. (Grinders, cutler), Cincinnati, O.  
 Obenchain & Boyer Co., The (Fire apparatus), Erie and Elm, Logansport, Ind.  
 Ober Mfg. Co., The (Woodworking mach'y), Chagrin Falls, O.  
 Oberdorfer, M. L., Brass Co. (Oil pumps), 816 E. Water St., Syracuse, N. Y.  
 Oberle, J. F. (Pipe rests), 238 E. 42d St., New York.  
 Obermayer, S., Co., The (Foundry supplies), 647 Evans St., Cincinnati, O.; Chicago; Pittsburgh.  
 Oberndorf Mfg. Co., The (Plumbing brass goods), 7509 Thomas Blvd., Pittsburgh, Pa.  
 O'Brien, John, Boiler Works Co. (Water tube boilers, etc.), 11th and Mullanphy Sts., St. Louis, Mo.  
 Odin Stove Mfg. Co. (Gas heaters, etc.), Erie, Pa.  
 Oesterlein Machine Co., The (Grinders, etc.), 2846-50 Spring Grove Ave., Cincinnati, O.  
 Ofeldt Gas Fired Boiler Co., Inc. (Water regulators), Nyack, N. Y.  
 Ogden, J. Edward, Co. (Fire doors), 147-149 Cedar St., New York.  
 ♦ Ohio Body & Blower Co., The (Ventilators, steam separators, etc.), 5125 Perkins Ave., N. E., Cleveland, O.  
 ♦ Ohio Brass Co., The (Valves, etc.), Mansfield, O.; 50 Church St., New York; 343 S. Dearborn St., Chicago.  
 Ohio Brass & Copper Co., The (Copper), 424 Elm St., Cincinnati, O.  
 Ohio Buff & Mfg. Co., The (Buffing wheels, etc.), 1924-26 W. 8th St., Cincinnati, O.  
 Ohio Chemical Mfg. Co. (Carbide), 1177 Marquette St., Cleveland, O.  
 Ohio Crane Co. (Traveling cranes), Bucyrus, O.  
 Ohio Electric & Controller Co. (Lifting magnets), 5900 Maurice Ave., Cleveland, Ohio.  
 Ohio Grease Co., The (Lubricators), 505 W. Spring St., Loudonville, O.; Philadelphia; Pittsburgh; Richmond; Cincinnati; Chicago; St. Louis; Memphis; New Orleans; Kansas City; Portland; Joplin, Mo.; Seattle; Atlanta; Shreveport.  
 Ohio Heater Co., The (Water heaters), Columbus, O.  
 ♦ Ohio Injector Co., The (Engine room specialties), Wadsworth, O.; 100 Hudson St., New York; 1437 Monadnock Blk., Chicago.  
 Ohio Knife Co. (Machine knives), C. H. & D. R. R. and Dremar Ave., Cincinnati, O.; New Orleans, Seattle.  
 Ohio Locomotive Crane Co. (Locomotives, cranes), Bucyrus, O.  
 Ohio Machine & Boiler Co. (Boilers and tanks), 1503 University St., Cleveland, O.  
 Ohio Machine Tool Co. (Metal working mach'y), Kenton, O.  
 Ohio Mfg. Co., The (Lathe pans, etc.), Painesville, O.  
 Ohio Metal Co. (Babbitt metal, etc.), 1133 N. 4th St., Columbus, O.  
 Ohio Motor Co., The (Gas engines), Sandusky, O.  
 Ohio Nut & Bolt Co. (Bolts, rivets, screws), Front St. & 1st Ave., Berea, O.  
 Ohio Pump & Brass Co., The (Pumps and brass fittings), Oak and 18th Sts., Columbus, O.  
 Ohio Quarries Co., The (Grindstones), 1301 Citizen's Bldg., Cleveland, O.  
 Ohio Road Machinery Co. (Road machinery), Oberlin, Ohio.



- Ohio Rubber Co., The (Mechanical rubber goods), 725-33 St. Clair Ave., N. W., Cleveland, O.; Cincinnati; Detroit.
- Ohio Sanitary Wipers Co. (Mach'y wipers), 2251 Smead Ave., Toledo, O.
- Ohio Seamless Tube Co., The (Steel tubing), Shelby, O.; 2 Rector, New York; 1017 Engineers Bldg., Cleveland; 122 S. Michigan Ave., Chicago; 1217 Dime Bank Bldg., Detroit.
- ◆ Ohio Valley Pulley Works, Inc., The (Pulleys), Maysville, Ky.; Export office: 21 State St., New York.
- Ohio Valley Supply Co., The (Gas engines and power pumps), Marietta, O.
- Ohl, Geo. A., & Co. (Sheet metal mach'y), Newark, N. J.
- ◆ Ohlen-Bishop Co., The (Saws), Columbus, Ohio; Lawrenceburg, Ind.; Atlanta; Cleveland; New York; Portland; St. Louis; San Francisco; Boston; Chicago.
- Oil City Boiler Works (Tanks and boilers), Oil City, Pa.; 501 Fifth Ave., New York; 1224 Marquette Bldg., Chicago; House Bldg., Pittsburgh.
- Oil City Oil & Grease Co. (Lubricants), Oil City, Pa.; Canton, O.; Pittsburgh.
- Oil & Waste Saving Machine Co., The (Oil and waste separators), 1509 Real Estate Trust Bldg., Philadelphia, Pa.
- Oil Well Supply Co. (Mach'y, tools and fittings), 215 Water St., Pittsburgh, Pa.
- O. K. Clutch & Machinery Co. (Friction clutches, etc.), Columbia, Pa.
- O. K. Tool Co., Inc. (Tool holders, etc.), Shelton, Conn.
- Okey Mfg. Co. (Gas engines), Columbus, O.
- Oklahoma Iron Works (Well drilling mach'y and tools), Tulsa, Okla.
- Oklahoma Producing & Refining Corporation of America, Muskogee Refining Div. (Lubricating oils), Muskogee, Okla.
- Oldham, George, & Son Co. (Pneumatic tools), 4320 Lackawanna St., Frankford, Pa.; Philadelphia, Pa.; Boston; Pittsburgh; St. Louis; Barre, Vt.; Birmingham; Seattle; Salt Lake City; Paris; Aberdeen.
- O'Leary, Arthur J., & Son Co. (Tools and forgings), 5757 W. 65th St., Chicago, Ill.
- Oleite Corp. (Compound boilers), 110 William St., New York, N. Y.
- Olin Gas Engine Co., Inc. (Gas engines), 10 Lock St., Buffalo, N. Y.
- Oleum Products Co. (Dressing, belt and polish metal), 1129-31 Capouse Ave., Scranton, Pa.
- Oliver Barth Jack Co. (Lifting jacks), 348-352 Milwaukee St., Milwaukee, Wis.
- Oliver & Howland Co. (Water heaters and steam traps), 240 Main St., Springfield, Mass.
- Oliver Instrument Co., The (Metal sawing machines), Adrian, Mich.
- ◆ Oliver Iron & Steel Co., The, S. 10th and Muriel Sts., Pittsburgh, Pa.; 50 Church St., New York; Monadnock Bldg., San Francisco.
- Oliver Machinery Co. (Woodworking mach'y), Grand Rapids, Mich.; 50 Church St., New York; 1125 W. Temple St., Los Angeles; 400 Bank of Commerce Bldg., St. Louis; Monadnock Bldg., San Francisco.
- Oliver, Wm. J., Mfg. Co., The (Industrial cars), Knoxville, Tenn.
- Oliver, W. W., Mfg. Co., The (Lathes, drills, etc.), 1483 Niagara St., Buffalo, N. Y.
- Ollendorf, Henry, 541 Lincoln Place, Brooklyn, N. Y.
- Olmstead, A. E., & Sons (Steam and gas engines), Pulaski, N. Y.
- Olmsted-Flint Co. (Leather belting), Cambridge, Mass.; New York.
- Olmsted, L. H., Mfg. Co. (Hack saws and other tools), Hasbrouck Heights, N. J.; 2588 3rd Ave., New York.
- Olmstead-Thomson Mfg. Co. (Plumbers' woodwork), New Britain, Conn.
- Olney & Warrin, Inc. (Machine keys, woodworking mach'y, etc.), 301 Lafayette St., New York, N. Y.
- Olson, Tinius, Testing Machine Co. (Testing machines), 500 N. 12th St., Philadelphia, Pa.
- Olyphant Foundry Co. (Brackets, grates, etc.), Olyphant, Pa.
- O'Malley-Bearse Valve Co. (Valves), 80 E. Jackson Blvd., Chicago, Ill.; 336 Olive Bldg., Pittsburgh, Pa.; 56 Stewart St., San Francisco; New York.
- O'Malley Mfg. Co. (Plumbers' brass goods), Scranton, Pa.
- Oneida Motor Truck Co. (Electric trucks), Green Bay, Wis.
- Oneida Wood Pulley Co., Inc. (Wood split pulleys), Oneida, N. Y.
- O'Neill Bros. (Waste), Howard and Oxford Sts., Philadelphia, Pa.
- Ono Frezo Fire Extinguisher Mfg. Co., 214-216 S. 17th St. (Extinguishers, fire), St. Louis, Mo.
- Onward Mfg. Co. (Pulley coating), Menasha, Wis.
- Open Coil Heater & Purifier Co. (Feed water heaters), 502 S. Penn St., Indianapolis, Ind.; 518 Oliver Bldg., Boston; The Bourse, Philadelphia.
- Orange Machine & Mfg. Co. (Pipe vises), 354 S. Jefferson St., Orange, N. J.
- Organ Blowing Engine Co. (Organ blowing motors), Fond du Lac, Wis.
- Organ Power Co., The (Organ blowing motors), 620 Capitol Ave., Hartford, Conn.
- Oriental Emery Co. (Emery), R. R. and Grand Ave., New Haven, Conn.
- Orr & Sembower, Inc. (Hoisting engines and boilers), Reading, Pa.; 208 N. Clinton St., Chicago.
- Orton & Steinbrenner Co. (Locomotive cranes), 610 S. Dearborn St., Chicago, Ill.
- Orum, Morris L. (Woodworking cutters), 503 N. 11th St., Philadelphia, Pa.
- Osborn Mfg. Co. (Foundry supplies), 5401 Hamilton Ave., N. E., Cleveland, O.; 3rd Ave. at 35th St., Brooklyn; 155 No. Clark St., Chicago; 280 McDougall Ave., Detroit; 61 1st St., San Francisco.
- Osborne, C. S., & Co. (Pliers), Newark, N. J.
- Osborne & Stephenson Co., The (Screw machine products), Plainville, Conn.
- Osgood, J. L., Lubricator Co. (Multiple oilers), 43 and 45 Pearl St., Buffalo, N. Y.
- Osgood, J. L., Tool Co. (File and tool handles), 45 Pearl St., Buffalo, N. Y.
- Osgood Co., The (Machinery), Marion, Ohio.
- Oshkosh Mfg. Co., The (Logging tools and supplies), Oshkosh, Wis.
- Oster Mfg. Co., The (Threading mach'y), 2160 E. 61st Pl., Cleveland, O.
- Oswego Tool Co. (Tools), 121-6 W. First St., Oswego, N. Y.; 1017 Hennen Bldg., New Orleans; 47 Bleury St., Montreal; 1836 Baker St., San Francisco; Buffalo.
- Otis Elevator Co. (Elevators), 11th Ave. and 28th St., New York, N. Y. Branches in all cities.
- Otis, Spencer, Co. (Nut locks), 80 E. Jackson Blvd., Chicago, Ill.
- Otley Paint Mfg. Co. (Pipe joint cement, etc.), 1742 Winchester Ave., N., Chicago, Ill.
- Ott Grinder Co., The (Grinding machines), 200 W. 10th St., Indianapolis, Ind.
- Ottawa Mfg. Co. (Gas engines), Ottawa, Kan.
- ◆ Ottemiller, Wm. H., Co. (Screws), M. & P. R. R. and Pattison St., York, Pa.
- Otto Engine Mfg. Co. (Gas engines, etc.), 33d and Walnut Sts., Philadelphia, Pa.; 15 S. Clinton St., Chicago; 244 Fulton St., New York.
- Ottumwa Iron Works (Hoisting engines), Ottumwa, Ia.
- Ottumwa-Moline Engine & Pump Co. (Pumps, gas engines, etc.), Ottumwa, Ia.
- Oven Equipment & Manufacturing Co. (Core ovens), New Haven, Conn.
- Ovenden, W. C. (Radiator foot rests), West Boylston, Mass.
- Overpack, S. C. (Logging wheels), Manistee, Mich.
- Owen Bucket Co., The (Coal and ore buckets), Rockefeller Bldg., Cleveland, O.
- Owen, R. M., & Co. (Electric lighting plants), 1825 S. Michigan Ave., Chicago, Ill.
- Owensboro Ditcher & Grader Co. (Road machinery), Owensboro, Ky.; 1527 Wazee St., Denver, Colo.
- Oxweld Acetylene Co. (Oxy-acetylene apparatus), 3542 Jasper Place, Chicago, Ill.; Newark; San Francisco.
- Ozark Mfg. Co. (Boiler compounds), 9861 Lorain Ave., Cleveland, O.

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- P. & G. Tool Co., The (Reamers), 56 Murray St., New York.
- Pacific Coast Pipe Co. (Wood pipe), 4515 14th Ave., N. W., Seattle, Wash.
- Pacific Coast Rubber & Sup. Co. (Packing), 316 Mission St., San Francisco, Cal.
- Pacific Flush Tank Co. (Flushing siphons), 4241 Ravenswood Ave., Chicago, Ill.; Singer Bldg., New York.
- Pacific Machine Tool Co. (Drill presses, etc.), 325 Commercial St., Los Angeles, Calif.
- Pacific Metal Works (Bearing metal), 153-159 1st St., San Francisco; 651 N. Main St., Los Angeles.
- Pacific Porcelain Ware Co. (Vitreous plumbers' earthenware), 67 New Montgomery St., San Francisco, Cal.
- Pacific Sanitary Mfg. Co. (Baths, sinks, etc.), 67 New Montgomery St., San Francisco, Cal.; Portland, Ore.; Los Angeles.
- Pacific Tank & Pipe Co. (Wood pipe), 318 Market St., San Francisco, Cal.; 910 Trust & Savings Bank, Los Angeles; New York; Chicago; Salt Lake City; San Antonio, Tex.
- Packer Auto Specialty Co. (Auto wrenches), 1420 Michigan Ave., Chicago, Ill.
- ◆ Page Belting Co. (Leather belting, etc.), Concord, N. H.; New York; Chicago; Boston; Philadelphia.
- Page Boiler Co. (Boilers and tanks), 343 S. Dearborn St., Chicago, Ill.
- Page, Wm. H., Boiler Co., The (heating boilers), 141 W. 36th St., New York, N. Y.; Boston; Philadelphia; Cleveland; Meadville, Pa.
- Page Engineering Co. (Steam engines), Hull and Claggett Sts., Baltimore, Md.
- Paige & Jones Chemical Co. (Feed water treatment), 248 Fulton St., New York, N. Y.
- Paine Company (Toggle bolts), 140 S. Dearborn St., Chicago.



- Paine Metallic Packing Co. (Packing), Shawanese, Luzerne Co., Pa.
- Palmer, A. E., & Sons (Glue room clamps), Owosso, Mich.
- Palmer-Bee Co. (Conveying equipment), 2778-94 E. Grand Blvd., Detroit, Mich.
- Palmer Bros. Engine Co. Inc. (Gas engines), Cos Cob, Conn.; 31 E. 21st St., New York, N. Y.; Portland Pier, Portland, Me.; 514 E. Pratt St., Baltimore, Md.; 9 N. 6th St., Philadelphia, Pa.
- Palmer, N., & Co. (Leather belting), 571 Iranistan Ave., Bridgeport, Conn.
- Pangborn Corp. (Sandblast mach'y), Hagerstown, Md.
- Panhard Oil Corp. (Oils and lubricants), 395 Broadway, New York.
- Pannier Bros. Stamp Co. (Steel stamps), 207-209 Sandusky St., Pittsburgh, Pa.
- Paradine Mfg. Co. (Curb boxes), 951 W. 19th St., Erie, Pa.
- Paragon Gear Works (Evans Stamping & Plating Co.) (Gears), Taunton, Mass.
- Paragon Tool Co. (Boiler makers' tools), 610 E. Pine St., Seattle, Wash.; Portland, Ore.
- Pardee, C., Works, The (Steel), Perth Amboy, N. J.; 447 Drexel Bldg., Philadelphia, Pa.
- Pardel Corp. (water tube boilers), Sheridan Bldg., Philadelphia, Pa.
- Paragon Machine Co. (Blue print machines), Rochester, N. Y.
- Park & McKay (Plumbing goods), 237-245 Bagley Ave., Detroit, Mich.
- Park Mfg. Co., The (Power pumps, etc.), Charlotte, N. C.
- Parker Cup & Specialty Works (Valve cups), Parkers Landing, Pa.
- Parker, A. A. (Contractors' pumps), Waterford, N. Y.
- ♦ Parker, Chas. Co., The (Tools, lighting fixtures and specialties), 48 Elm St., Meriden, Conn.; 25 Murray St., New York.
- Parker Expansion Bolt Co. (Screws, handles, etc.), 137 Lafayette St., New York.
- Parker Machine Co. (Tool holders), 221 High St., Boston, Mass.
- Parker Mfg. Co. (Drill chucks), Ann Arbor, Mich.
- Parker Rust-Proof Co. (Rust-proof process), 2177 E. Milwaukee Ave., Detroit, Mich.
- Parker, S. E. (Hoisting apparatus), 28-38 N. Kilbourn Ave., Chicago, Ill.
- Parker White Metal & Machine Co. (Die castings), Erie Pa.; 502 Book Bldg., Detroit.
- Parkersburg Rig & Reel Co. (Well drilling mach'y), and tools, Parkersburg, W. Va.; Tulsa, Okla.
- Parkeburg Iron Co. (Boiler tubes, etc.), Parkersburg, Pa.; 30 Church St., New York; Commercial Trust Bldg., Philadelphia; Fischer Bldg., Chicago.
- Parkinson Mfg. Co., The (Ball cocks), Ashland, O.
- Parks Ball Bearing Machine Co. (Woodworking machinery), Fergus and Knowlton Sts., Cincinnati, O.
- Parks-Cramer Co. (Humidifiers), Fitchburg, Mass.; Boston, Mass.; Charlotte, N. C.
- Parks Engineering Co. (Indicating instruments), 450 N. 10th St., Philadelphia, Pa.
- Parrott Tractor Co. (Gasoline tractors), Chicago Heights, Ill.
- Parrott Heater Co. (Water heaters), 1450 21 St., Detroit, Mich.
- Parry, Samuel R. (Paper box mach'y), 223 Mill St., Rochester, N. Y.
- Parson Co., The (Ditching machines), Newton, Ia.; 145 Centre St., New York; 11 So. La Salle St., Chicago.
- ♦ Partridge, E. O. (Grinders), 2047 W. Lake St., Chicago.
- Paschall Tool Co. (Lathe attachments), foot of West 7th St., Long Beach, Calif.
- Pass & Seymour, Inc. (Electric lamp supplies), Solvay, Syracuse, N. Y.; Rialto Bldg., San Francisco; Boston; Chicago; New York.
- Passaic Metal Packing Co. (Packings), Delawanna, N. J.
- Passman Bros. (Friction clutches), 30 S. Green St., Chicago, Ill.
- Patch, F. R., Mfg. Co. (Hoisting engines), Rutland, Vt.
- Patric Furnace Co. (Furnaces), Springfield, O.
- Patten Mfg. Co. (Electric hoists), Chattanooga, Tenn.
- Patent Vulcanite Roofing Co. (Roofing), 111 West Washington St., Chicago, Ill.
- Patriarche & Bell (Steel sheets), 315 Pearl St., New York, N. Y.
- Patriarche & Bell (Steel tool), 351 West St., New York, N. Y.
- Patterson Co., The (Water regulators), 2511 N. Calvert St., Baltimore, Md.
- Patterson, C. T., Co., Ltd. (Sawmill specialties), New Orleans, La.
- Patterson Hand Stoker Corp. (Hand fired stokers), Baltimore, Md.
- Patterson-Kelley Co., Inc. (Heaters, pumps, separators), 26 Cortland St., New York, N. Y.; 421 N. 19th St., Philadelphia, Pa.; 445 Atlantic Ave., Boston, Mass.; Railway Exchange, Chicago, Ill.; Guardian Bank Bldg., Cleveland, O.; East Stroudsburg, Pa.
- Patterson-Kiser Seat Co. (Closet seats), Greensboro, N. C.
- Patterson Locknut Mfg. Co. (Locknuts), 400 N. Michigan Ave., Chicago, Ill.
- Patterson Lubricating Co. (Greases, metal polish, belt dressing), 114 Broad St., Boston, Mass.
- Patterson Machine Co. (Damper regulators), Bee Hive Bldg., Baltimore, Md.
- Pattin Bros. Co., The (Engines, pumps, etc.), Marietta, O.
- Paulus, Jos. C., & Co. (Leather belting), 2507-11 Potter St., Philadelphia, Pa.
- Pauly Jail Bldg Co., Inc. (Jail fixtures), 2215-25 Debolt St., St. Louis, Mo.; Metropolitan Bldg., New York.
- Pawling & Harnschfeger Co. (Cranes and hoists), 38th and National Aves., Milwaukee, Wis.; Church St., New York; Stephen Girard Bldg., Philadelphia; Whitney Central Bldg., New Orleans; Fidelity Bldg., Pittsburgh; Monadnock Bldg., Chicago; Yeon Bldg., Portland; Central Bldg., Los Angeles; 32 Beale St., San Francisco; L. C. Smith Bldg., Seattle.
- Pawtucket Mfg. Co. (Bolts, nuts, rivets), 327 Pine St., Pawtucket, R. I.
- Paxson, J. W., Co. (Foundry supplies), 1021 Delaware Ave., N. Philadelphia, Pa.; Providence, R. I.; Baltimore.
- Paxton-Mitchell Co., The (Metallic packing), 37th and Martha Sts., Omaha, Neb.
- Paynter, J. E., & Sons (Range boiler wrenches), Franklinville, N. Y.
- Payne-Dean, Ltd. (Valve control apparatus), New York, N. Y.
- Payson Mfg. Co., The (Truck casters, etc.), 2916-30 W. Jackson Blvd., Chicago, Ill.
- Pearson Jack Co. (Car movers), Boston, Mass.
- Pearson, J. C., Co., Inc. (Coated nails), Boston, Mass.
- Pease, C. F., Co., The (Blueprinting machines), 813 N. Franklin St., Chicago, Ill.; 625-30 Church St., New York; 1503 Oliver St., Pittsburgh.
- Pearson Mfg. Co. (Nailing tools), Robbinsdale, Minn.
- Pech, Gus, Foundry & Mfg. Co. (Well drilling mach'y), Le Mars, Ia.
- Pechin Belting Co. (Leather belting), Torresdale Ave. and Orchard St., Philadelphia, Pa.
- Peck Bros. & Co., The (Plumbing supplies), 127 Chestnut St., New Haven; 319 W. 49th St., New York.
- Peck, Cassius C. (System and pumps), Ellwanger & Barry Bldg., Rochester, N. Y.
- Peck, E. E., & Co. (Rivets and washers), Batavia, N. Y.
- Peck, Geo. F., Mfg. Co. (Pump valves), 92 State St., Boston, Mass.
- Peck, Stow & Wilcox Co., The (Mechanics' tools), Southington, Conn.; 2176 W. 3d St., Cleveland, O.
- Pecora Paint Co. (Paints, etc.), 5th and Sedgley Ave., Philadelphia, Pa.
- Peerless Alloy Co., The (Bearing metal), Denver, Colo.
- Peerless Automatic Machine Co., The (Screw machines and products), 1962 W. 77th St., Cleveland.
- Pedrick Tool & Machine Co. (Machines), 3644 Lawrence St., Philadelphia, Pa.
- Peerless Belt Lacing Machine Co. (Belt lacing machinery), Swanson and Moore Sts., Philadelphia, Pa.
- Peerless Belting Co. (Belting, etc.), Gardenville, N. Y.; Buffalo; Birmingham; Cincinnati; Chicago; Cleveland; Detroit; Holyoke, Mass.; Philadelphia; Louisville; New York.
- Peerless Boiler Co., Not Inc. (Range boilers and heaters), 190 N. La Salle St., Chicago, Ill.
- Peerless Drawn Steel Co. (Steel), Massillon, O.
- Peerless Electric Co., The (Electric motors, fans, etc.), Warren, O.
- ♦ Peerless Foundry Co., Pittsburgh, Pa.
- Peerless Granite Co. (Laundry trays), 4513 Hudson Co. Blvd., Weehawken, N. J.
- Peerless Heater Co. (Boilers), 5602 Baum Blvd., Pittsburgh, Pa.; Cleveland; Columbus; Los Angeles; New York; San Francisco.
- Peerless Light Co. (Gasoline lighting systems), 663-71 W. Washington Blvd., Chicago; 537 Broadway, New York; 149 Second St., San Francisco.
- Peerless Machine Co. (Metal cutting machines), 1616 Racine St., Racine, Wis.
- Peerless Range Boiler Corp. (Range boiler), 108 S. La Salle St., Chicago, Ill.
- Peerless Safety Can & Device Mfg. Co. (Oil cans), 127 S. Green St., Chicago.
- Peerless Selling Co., The (Water closet combinations), Evansville, Ind.
- Peerless Smelting & Refining Co. (Soldier and babbitt), Allegheny Ave. and Richmond St., Philadelphia, Pa.
- Peerless Surfacing Machine Co., Inc. (Sanding machines), Troy, N. Y.
- Peerless Tank & Seat Works, The (Plumbers' woodwork), Evansville, Ind.
- Peerless Tool Co. (Lifting tools), 208 So. La Salle St., Chicago, Ill.
- Peirce, W. E., & Co. (Plumbing woodwork), Millford, N. H.
- Pels, Henry, & Co. (Mach'y and railroad supplies), 90 West St., New York, N. Y.
- Pelton Water Wheel Co., The (Water wheels and turbines), San Francisco, Cal.; 90 West St., New York, N. Y.

◆ Penberthy Injector Co. (Injectors), 1262 Holden Ave. and Grand Trunk Ry., Detroit, Mich.; New York.  
 Penfield Saw Works, The (Saws and machine knives), Bristol, Conn.  
 Peninsular Brass Works (Steam and gas cocks), Walton and Warren, Detroit, Mich.  
 Peninsular Grinding Wheel Co. (Grinding wheels), 729 Meldrum Ave., Detroit, Mich.  
 Penn Brass Mfg. Co. (Plumbing brass goods), 4812 Superior Ave., Cleveland, Ohio.  
 Penn Burner & Manufacturing Co. (Gas heaters and logs), 828 W. North Ave., Pittsburgh, Pa.  
 Penn Electric Machine Co. (Pump switches), 114 Eighth St., Des Moines, Ia.  
 Penn Engineering Co., The (Heating specialties), 313 Cherry St., Philadelphia, Pa.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Penn Engineering Co. (Vise post and pipe bender), Reading, Pa.  
 Penn Petroleum & Supply Co. (Oils), 1224-30 Washington Ave., Philadelphia, Pa.  
 Penn Pottery Co. (Plumbing fixtures), Westmoreland and Tulp Sts., Philadelphia, Pa.  
 Penn Wire Works (Wire), 233 Arch St., Philadelphia, Pa.  
 Pennsylvania Alcohol & Chemical Co., 18 N. Water St., Philadelphia, Pa.  
 Pennsylvania Boiler Works (Tanks and boilers), Erie, Pa.; 657 First Nat'l Bank, Chicago, Ill.  
 Pennsylvania Engineering Works (Steel mill equipment), New Castle, Pa.  
 Pennsylvania Flexible Metallic Tubing Co. (Flexible tubing), Broad and Race Sts., Philadelphia, Pa.; 11 High St., Boston; 30 Church St., New York; 122 S. Michigan Ave., Chicago; Rockefeller Bldg., Cleveland, O.  
 Pennsylvania Furnace & Stove Co. (Gas stoves and furnaces), 1305-7 4th Ave., Warren, Pa.  
 Pennsylvania Globe Gas Light Co. of Philadelphia (Gas generating machines), 1930-34 Market St., Philadelphia, Pa.  
 Pennsylvania Grinding Wheel Co. (Grinding wheels), Wayne Ave. and Berkley St., Philadelphia, Pa.  
 Pennsylvania Lubricating Co. (Cutting lubricants), 34th and A. V. R. R., Pittsburgh, Pa.  
 Pennsylvania Pneumatic Co. (Air compressors), Erie, Pa.; 956 Ellicott Sq., Buffalo.  
 Pennsylvania Pump & Compressor Co. (Pumps, etc.), Easton, Pa.  
 Pennsylvania Range Boiler Co. (Tanks and boilers), 2024 N. 10th St., Philadelphia, Pa.  
 Pennsylvania Rubber Co. (Belting, hose, etc.), Jeanette, Pa.; Chicago; Cleveland; Detroit; San Francisco.  
 Pennsylvania Smelting Co. (Pig lead and bearing metal), 2408 First National Bank Bldg., Pittsburgh, Pa.  
 Pennsylvania Structural Slate Co., Inc. (Plumbers' and structural slate), Drake Bldg., Easton, Pa.  
 Penryhn Slate Co., The (Plumbers' slate), Middle Granville, N. Y.  
 Perfect Gas Controller & Fixture Co. (Gas regulators), 10103 Prospect Ave., Chicago, Ill.  
 Perfect Manufacturing Co. (Vehicle washers), Box 350, Albany, N. Y.  
 Perfect Tank & Seat Co. (Seats and tanks), Syracuse, N. Y.  
 Perfection Grate & Supply Co. (Grates), 164 Birnie, Springfield, Mass.  
 Perfection Tire & Rubber Co. (Auto tires and hose), Wabash, Ind.  
 Perfection Wood-Steaming Retort Co. (Wood steamers), Parkersburg, W. Va.  
 Perfection Wrench Co. (Wrenches), Port Chester, N. Y.  
 Perkes, Chas., Co. (Piping specialties), 627-629 Arch St., Philadelphia, Pa.  
 Perkins, B. F., & Son, Inc. (Ventilating fans), Holyoke, Mass.  
 Perkins & Co. (Woodworking mach'y), 563 N. Front Ave., Grand Rapids, Mich.  
 Perkins Co., The (Plumbing brass goods), 4 Porter St., Taunton, Mass.  
 Perkins Machine Co., The (Presses, drop hammers, etc.), Warren, Mass.  
 Perkins Marine Lamp Co. (Marine lamps), 1943 Pitkin Ave., Brooklyn, N. Y.  
 Perkins Windmill & Engine Co. (Windmills and gas engines), Mishawaka, Ind.  
 Permutit Co., The (Water filters and softeners), 440 Fourth Ave., New York, N. Y.; Albany; Boston; Buffalo; Chattanooga; Jacksonville, Fla.; Minneapolis; Hamilton, Canada; Montreal; Kansas City; Los Angeles; Philadelphia; Pittsburgh; St. Louis.  
 Perolin Co. of America, The (Boiler metal treatment), Peoples Gas Bldg., Chicago, Ill.; Woolworth Bldg., New York.  
 Perrigo, Inc. (Radiation calculators), Railroad Ave. and New St., New Haven, Conn.  
 Perrin, Wm. R., & Co. (Power presses), 504 Fisher Bldg., Chicago, Ill.  
 Perry, T. O. (Vacuum cleaners), 324 N. Euclid Ave., Oak Park, Ill.  
 Perry-Fay Co. (Screw machine products), Elyria, Ohio.

Persons-Arter Machine Co., The (Grinding machines), Worcester, Mass.  
 Peru Brass & Mfg. Co. (Solder nipples), Peru, Ind.  
 Peter Bros. Mfg. Co. (Metal saws), Algonquin, Ill.  
 Peters Pump Co. (Pumps, etc.), Kewanee, Ill.  
 Peterson, A. H., Mfg. Co. (Electric drills), Milwaukee, Wis.  
 Peterson, F. W., Co. (Wood handles), 68 Thomas St., New York, N. Y.  
 Petrium Sanitary Sink Co. (Sinks), 5th and Page Sts., Berkeley, Calif.  
 Petry, N. A., Co. (Thumb screws, etc.), 328-34 N. Randolph St., Philadelphia, Pa.  
 Petroleum Heat & Power Co. (Fuel oil burners), 511 Fifth Ave., New York.  
 Petroleum Iron Works Co. (Steel barrels), Sharon, Pa.; 25 West 43rd St., New York, N. Y.; Liberty Central Trust Co. Bldg., St. Louis, Mo.; 503 Market St., San Francisco, Calif.; 1110 Carter Bldg., Houston, Tex.; Apartado 83 Bis. Tampico, Mex.  
 Pettes & Randall Co. (Watchman's clocks), 150 Nassau St., New York, N. Y.  
 Petty, J. O. (Saw sets), Belvidere, Ill.  
 Petty & Co., Inc., J. K. (Tubular boilers), Harrison Bldg., Philadelphia, Pa.  
 Pfau Mfg. Co., The (Plumbers' woodwork, steam boilers, etc.), Mentor and Houston Aves., Norwood, Cincinnati, O.  
 Pfaudler Co., The (Laundry chutes), Rochester, N. Y.; Chicago, New York, San Francisco.  
 Pfeiffer, Frederick (Wrenches), 30 Warren St., New York, N. Y.  
 Pfeiffer, John, & Co. (Shovels and scoops), 222 Race St., Philadelphia, Pa.  
 Pfeiglar Hardware Specialty Co. (Water heaters), New Haven, Conn.  
 Pfugh, August F. (Pipe testing plugs), 106 Adams St., Hoboken, N. J.  
 Phaeton Heater Co. (Heaters), Peekskill, N. Y.; 139 Greenwich St., New York.  
 Phenix Tube Co. (Metal tubing), Driggs Ave., Warren, O.; 4640 W. Harrison St., Chicago.  
 Pheel Mfg. Co. (Brass nuts, screws, etc.), 5700 Roosevelt Road, Chicago, Ill.; 205 Kresge Bldg., Detroit; 268 Market St., San Francisco; L. C. Smith Bldg., Seattle.  
 Philadelphia Belting Co. (Leather belting, etc.), 6th and Spring Garden Sts., Philadelphia, Pa.; 17 Battery Pl., New York; 126 High St., Boston, Mass.; 540 W. Lake St., Chicago; 304 Oliver Bldg., Pittsburgh.  
 Philadelphia Elevator Co. (Elevators), 3207 Spring Garden St., Philadelphia.  
 Philadelphia Gear Works, Inc. (Gears), 1120 Vine St., Philadelphia, Pa.  
 Philadelphia Grease Mfg. Co., The (Lubricants), 846 50 S. Swanson St., Philadelphia, Pa.; Boston; New York.  
 Philadelphia Pipe Bending Co., The (Pipe coils, bends, etc.), 4135-65 N. Fifth St., Philadelphia.  
 Philadelphia Sheet Metal & Wood Works, The (Plumbing woodwork), 1836 E. Clearfield St., Philadelphia.  
 Philadelphia Tramrail Co. (Overhead trolley tracks), Front and Tusculum Sts., Philadelphia, Pa.  
 Philbrick Cutter Head Co. (Cutter heads), 536 1st Ave. So., Seattle, Wash.  
 Philip's, Andrew, Sons (Fusible plugs), 28 West St., Philadelphia.  
 Philips Pressed Steel Pulley Wks. (Steel pulleys), Chestnut Hill, Philadelphia, Pa.  
 New York, N. Y.  
 Phillips, Doup and Co., Inc. (Wheelbarrows, cars, etc.), First Ave. at 44th St., Brooklyn, N. Y.  
 Phillips, F. R., & Sons Co. (Babbitt metal), Pennsylvania Bldg., Philadelphia, Pa.  
 Phillips Flush Tank Co. (Valves), 66 Batterymarch St., Boston, Mass.  
 Phillips Heating, Ventilating & Mfg. Co. (Heating furnaces), 1224 S. Figueroa St., Los Angeles, Cal.  
 ◆ Phillips-Lafite Company (Welding and brazing supplies), Pennsylvania Bldg., Philadelphia, Pa.  
 Phillips Lead & Supply Co. (Lead products), 91-95 Main St., S. Providence, R. I.  
 Phillips Pub. & Mfg. Co. (Spray pumps), P. O. Box 1077, Atlanta, Ga.  
 Phillips, R. B., Mfg. Co. (Machine screws), 3 Grand St. Court, Worcester, Mass.  
 Phoenix Brush & Mfg. Co. (Brushes wire), 160 N. Wells St., Chicago, Ill.  
 Phoenix Caster Co. (Truck casters), Indianapolis, Ind.  
 Phoenix Fire Extinguisher Co., Norwich, Conn.  
 Phoenix Hardware Mfg. Co. (Vises, clamps, etc.), 49 Illinois St., Buffalo, N. Y.  
 Phoenix Ice Machine Co. (Ice and refrigerating mach'y), 2711 Church St., Cleveland, O.  
 Phoenix Iron Works Co. (Tanks), Meadville, Pa.; 114 Liberty St., New York, N. Y.; 410 Walnut St., Philadelphia.  
 Phoenix Mfg. Co., The (Centering machines), 32 Union Pl., Hartford, Conn.  
 Phoenix Mfg. Co. (Steam engines and sawmill machinery), Eau Claire, Wis.

- Phoenix Oil Co., The (Dressing, lubricants, etc.), 2554 W. 5th St., Cleveland, O.; 30 Church St., New York; 1501 S. Peoria St., Chicago.
- Phoenix Slate Co., The (Slate), Wind Gap, Pa.
- Phoenix Soapstone Co. (Sinks, stalls, trays), 71 Murray St., New York, N. Y.
- Phoenix Specialty Mfg. Co. (Washers, gaskets, etc.), 48 Duane St., New York, N. Y.
- Phoenix Wire Works (Wire cloth), Kirby and Dequindre, Detroit, Mich.
- Phosphor Bronze Smelting Co. (Phosphor bronze), 2200 Washington Ave., Philadelphia, Pa.  
(See Index to advertisements, pages 7, 8 and 9.)
- Pickering Governor Co., The (Engine specialties), Portland, Conn.
- Pickering, R. S., Co. (Belt hooks), Sharonhill, Pa.
- Pierce, Butler & Pierce Mfg. Corp., Valve Gauge Div., Syracuse, N. Y.
- Pierce, Butler & Pierce Mfg. Corp. (Heating and plumbing goods), 437 East 162nd St., New York; Syracuse, N. Y.; 63 Federal St., Boston; Broad and Race Sts., Philadelphia; 101 Park Ave., New York.
- Pierce Mfg. Co. (Pipe joint cement), Bridgeport, Conn; Syracuse, N. Y.; 32 Foster St., Worcester, Mass.
- Pierce Packer Co. (Oil, gas and artesian well packers), Franklin, Pa.
- Pierce, Wm. B., Co., The (Flue cleaners), 45 N. Division St., Buffalo, N. Y.; 603 Park Row Bldg., New York.
- Pierson U-Bar Co. (Greenhouses), 1170 Broadway, New York.
- Pike, N. H., Mfg. Co. (Grinders, etc.), 151 Chambers St., New York, N. Y.
- ♦ Pilley Packing & Flue Brush Mfg. Co. (Packings and flue cleaners), 624 Third St., St. Louis, Mo.; 71 Fulton St., New York.
- Pilliod Lumber Co., The (Portable tool cases), Swanton, O.
- Pioneer Alloy Products Co. (Cocks), 16601 Euclid Ave., Cleveland, O.
- Pioneer Asbestos Packing Co. (Packings), Philadelphia, Pa.
- Pioneer Brass Works (Cocks, couplings, castings, etc.), 1102 East 23rd St., Indianapolis, Ind.
- Pioneer Rubber Mills (Mechanical rubber goods), 68 Sacramento St., San Francisco, Cal.; 223 S. Los Angeles St., Los Angeles; 312 Occidental Ave., Seattle; 40 N. 1st St., Portland, Ore.; 110 W. 2nd St. So., Salt Lake City; 1010 A St., Tacoma; 1726 Wazee St., Denver.
- Pioneer Tractor Mfg. Co. (Traction engines and mach'y), Front and Carimona Sts., Winona, Minn.
- Pipe Machinery Co., The (Cutting and threading mach'y), 930 E. 70th St., Cleveland, O.
- Piqua Handle & Mfg. Co., The (Valve handles), Piqua, O.
- Pirsch, Peter, & Sons Co. (Fire dept. equip.), Kenosha, Wis.
- Pittsburgh Block & Mfg. Co. (Tackle blocks, etc.), 818 South Ave., N. S., Pittsburgh, Pa.
- Pittsburgh Brass Mfg. Co. (Brass goods), Penn Ave. and 32d St., Pittsburgh; 100 Park Ave., Baltimore.
- Pittsburgh Bronze Casting Co. (Bearings), 525 Aspen St., Pittsburgh.
- Pittsburgh Crushed Steel Co. (Abrasive material), 61 St. and A. V. R. R., Pittsburgh, Pa.
- Pittsburgh-Des Moines Steel Co. (Towers and tanks), Des Moines, Ia.; 2059, 50 Church St., New York, N. Y.; 1217 Praetorian Bldg., Dallas, Tex.; 316 Rialto Bldg., San Francisco, Cal.; 959 Munsey Bldg., Washington, D. C.; Canadian-Des Moines Steel Co., Box 77, Chatham, Ont., Canada.
- Pittsburgh Electric Furnace Corp. (Electric furnaces), Union Bank Bldg., Pittsburgh.
- Pittsburgh Filter & Eng. Co. (Water filters), Farmers Bank Bldg., Pittsburgh, Pa.; 617 Rialto Bldg., Kansas City, Mo.
- Pittsburgh Grinding Wheel Co. (Grinding wheels), Rochester, Pa.; Chicago; Cleveland.
- Pittsburgh Instrument & Machine Co. (Hardness testing machines), Pittsburgh, Pa.
- Pittsburgh Knife & Forge Co. (Mine car hitchings), 709 Belmont St., N. S., Pittsburgh.
- Pittsburgh Lamp, Brass & Glass Co. (Fire extinguishers), Pittsburgh, Pa.
- Pittsburgh Machine Tool Co. (Engine lathes), Brad-dock, Pa.
- Pittsburgh Meter Co. (Meters), East Pittsburgh, Pa.; New York; Chicago; Kansas City; Columbia, S. C.; Seattle, Los Angeles.
- Pittsburgh Model Engine Co. (Gasoline engines), Pittsburgh, Pa.; Peru, Ind.
- Pittsburgh Nipple & Mfg. Co. (Pipe nipples), 1st and Carson Sts., Pittsburgh, Pa.
- Pittsburgh Piping & Equipment Co. (Pipe bends, etc.), 35th and Charlotte Sts., Pittsburgh, Pa.; 122 S. Michigan Ave., Chicago, Ill.; Ulmer Bldg., Cleveland; 220 Broadway, New York; 312 Traction Terminal Bldg., Indianapolis; Monadnock Bldg., San Francisco; American Trust Bldg., Birmingham.
- Pittsburgh Pump and Supply Co. (Force pumps), 20 Fourth St., Pittsburgh, Pa.
- Pittsburgh Rivet Co. (Rivets, bolts, etc.), 38th and Junction R. R., Pittsburgh, Pa.; 122 S. Michigan Ave., Chicago, Ill.
- Pittsburgh Saw & Mfg. Co. (Saws), 3200 Smallman St., Pittsburgh, Pa.
- Pittsburgh Screw & Bolt Co. (Bolts, nuts and rivets), 2410 Penn Ave., Pittsburgh, Pa.
- Pittsburgh Seamless Tube Co. (Steel tubing), Beaver Falls, Pa.
- Pittsburgh Shafting Co. of Detroit (Steel shafting), 1300 W. Fort St., Detroit, Mich.
- Pittsburgh Stamp Co., Inc. (Steel stamps), 815 N. Canal St., N. S., Pittsburgh, Pa.
- Pittsburgh Shovel Co., The (Shovels, scoops and spades), Oliver Bldg., Pittsburgh, Pa.
- ♦ Pittsburgh Steel Co. (Steel wire, hoops, fencing, etc.), Union Arcade Bldg., Pittsburgh, Pa.; New York; 332 S. Michigan Ave., Chicago, Ill.; Monadnock Bldg., San Francisco; Exchange Bldg., Memphis, Tenn.; Southwestern Life Bldg., Dallas, Tex.
- Pittsburgh Steel Products Co. (Tubing), Frick Bldg., Pittsburgh, Pa.; Equitable Life Bldg., New York; McCormick Bldg., Chicago; First Nat'l Bank Bldg., Duluth; Monadnock Bldg., San Francisco.
- Pittsburgh Tool Steel Wire Co. (Tool steel), Monaca, Pa.
- Pittsburgh Valve & Fittings Co. (Valves), Barberton, O.; Frick Bldg., Pittsburgh, Pa.
- Pittsburgh Valve Foundry & Construction Co. (Steam specialties), 26th St. and A. V. Ry., Pittsburgh, Pa.; New York; Boston; Cleveland; Chicago; Birmingham.
- Pittsburgh Water Heater Company (Copper coil gas water heaters), 110 Jenkins Arcade, Pittsburgh, Pa.; Buffalo; Baltimore; Boston; Brooklyn; Cincinnati; Cleveland; Chicago; Columbus; Denver; Detroit; Dallas; Dayton; Houston; Indianapolis; Kansas City; Los Angeles; Louisville; Milwaukee; Montreal; Newark; New Orleans; Oakland; Pasadena; Portland; Pittsburgh; Philadelphia; Seattle; St. Louis; St. Paul; San Antonio; San Diego; San Francisco; Washington, D. C.; Toronto.
- Pittsburgh White Metal Co. (Babbitt metal), 3116 Penn Ave., Pittsburgh, Pa.; New York; Boston.
- Plamondon, A., Mfg. Co. (Gears and friction clutches), 5301 S. Western Blvd., Chicago, Ill.
- Plank Flexible Shaft Machine Co. (Flexible shafting and machines), 710 Monroe Ave., Grand Rapids, Mich.
- Plant Engineering & Equipment Co., 11 John St., New York; St. Louis; Syracuse; Boston; Providence; Bridgeport; Newark; Philadelphia; Pittsburgh; Asheville, N. C.; Newnan, Ga.; New Orleans; Cleveland; Cincinnati; Louisville; Detroit; Chicago; Minneapolis; Omaha; Tulsa; Kansas City; San Francisco; Toronto; Montreal.
- Plant Rubber Co. (Belting, etc.), 322 First Ave., N., Minneapolis, Minn.
- Plastic Metallic Packing Co. (Packings), 1974 East 66th St., Cleveland, O.
- Platt, John (Steam traps), 97-103 Cedar St., New York.
- Platt Iron Works Co., The (Pumps, heaters, etc.), Dayton, O.; New York; Boston; Philadelphia; Baltimore; Chicago; Pittsburgh; Dallas; San Francisco; Atlanta; Cleveland; Kansas City; St. Louis; Denver; Indianapolis; Memphis; Minneapolis; New Orleans; Rochester; San Antonio.
- Plimpton Truck Co., The (factory trucks), Stamford, Conn.; Hamilton, Canada.
- Plomb Tool Mfg. Co. (Forged hand tools), 1119 Santa Fe Ave., Los Angeles, Cal.
- Plomo Specialty Mfg. Co., The (Belt dressing), Belmont Bldg., Cleveland, O.
- Plouff Co., The (Power plant specialties), 332 A St., Boston.
- ♦ Plumb, Fayette R., Inc., (Hammers, hatchets), Bridesburg Sta., Philadelphia, Pa.
- Plumbers' Woodwork Co. (Plumbers' woodwork), Algoma, Wis.
- Plume & Atwood Mfg. Co., The (Brass, bronze and copper goods), Waterbury, Conn.; 30 E. 42nd St., New York; 608 Heyworth Bldg., Chicago; 1122 Ellis St., San Francisco.
- Plunket, J. E. (Gas engines), 1342 W. Lake St., Chicago, Ill.
- Plymouth Cordage Co. (Manila rope), North Plymouth, Mass.
- Plymouth Foundry & Machine Co. (Hand power punches), Plymouth, Wis.
- Plymouth Metal Products Co. (Engines), Plymouth, Wis.
- Plymouth Mfg. (Pipe vise), 450 N. Hermitage Ave., Chicago, Ill.
- Pneumatic Placing Co., Inc. (Pneumatic conveying equipment), 2 Rector St., New York, N. Y.
- Pneumatic Scale Corp., Ltd. (Paper box machinery), Norfolk Downs, Mass.; Boston, New York, Chicago.
- Pneumelectric Corp., The (Rock drills, etc.), Syracuse, N. Y.
- Pneumercator Co., Inc., The (Gages and valves), 15 Park Row, New York, N. Y.
- Pohl, Geo. D., Mfg. Co. (Gas engines), Vernon, N. Y.

- Polk, A. J., & Son Co. (Reamers, etc.), Millersburg, Pa.; Chicago, Ill.
- Polk-Genung-Polk Co. (Steel tanks), Fort Branch, Ind.; 521 Occidental Bldg., Indianapolis, Ind.
- Pollard, Joseph G., Co. (Drills, tools, etc.), 141 Raymond St., Brooklyn, N. Y.
- Pollock Brush Co. (Brushes), 25-27 N. 4th St., Easton, Pa.
- Polygon Products Co. (Rust dissolver), 141 Milk St., Boston, Mass.
- Pond-Robinson Metal Saw Co., Ltd. (Metal cutting saws), 1204 Howard St., San Francisco, Cal.
- Poole, James W., Inc. (Soldering flux, etc.), 16 Columbia St., Boston, Mass.; 64 Kingston St., Boston, Mass.
- Poole Mfg. Co. (Flue cleaners), 325 Columbus Ave., Boston, Mass.
- Porcela-Radax Co., The (Tile and marble cleaners), New Brighton, Pa.
- Porcupine Co., The (Boilers), 730 Wordin Ave., Bridgeport, Conn.
- Portable Electric Safety Light Co. (Miners' lamps), 10 Johnson St., Newark, N. J.
- Portable Machinery Co. (Portable conveyors), Passaic, N. J.
- Portable Tool Sup. Co. (Portable hoists), 712 Ellicott Sq., Buffalo, N. Y.
- Portage Tire & Rubber Co., The (Tires and molded goods), Akron, O.; Atlanta, Boston, Cleveland, Cincinnati, Chicago, Des Moines, Detroit, Kansas City, Milwaukee, New York, Minneapolis, Dallas, Philadelphia, San Francisco.
- Porter-Cable Machine Co., The (Milling attachments), 1708 N. Salina, Syracuse, N. Y.
- Porter, C. O., Machinery Co. (Machine guards), 666-8 Front Ave. N.W., Grand Rapids, Mich.
- Porter, H. K. (Bolt clippers), 6 Ashland St., Everett, Mass.
- Porter, H. K., Co. (Industrial locomotives), Union Bank Bldg., Pittsburgh, Pa.
- Porter, J. E., Corp. (Door hangers), 455 Gulon St., Ottawa, Ill.; 426 Washington Ave., No. Minneapolis.
- Porter Machine Co. (Pulleys, clutches, couplings), Wooster, O.
- Porter Machine Works (Lathes), Hatfield, Mass.
- Portland Pulley Co. (Wood pulleys), Portland, Ore.
- Portland Rubber Mills (Mech'l rubber goods), Macadam and Nevada Sts., South Portland, Ore.
- Portland Co., The (Paper mach'y, boilers, etc.), Portland, Me.
- Portland Stove Foundry Co. (Heating furnaces, etc.), 39-57 Kennebec St., Portland, Me.
- Positive Lock Washer Co., The (Nutlock washers), Avenue A and Miller St., Newark, N. J.
- Post, E. L., Co., Inc. (Babbitt metal), 50 Cliff St., New York, N. Y.
- Potomac Pottery Co. (Sanitary pottery), Keyser, W. Va.
- Poston Baler Co. (Paper balers), Chillicothe, Ohio.
- Potter & Johnston Machine Co. (Lathes, etc.), Pawtucket, R. I.
- Potter Mfg. Co. (Hoisting and excavating mach'y), 3505 E. Washington St., Indianapolis, Ind.
- Potts, D. H., Co. (Forges, blowers, etc.), Lancaster, Pa.
- Potts Mfg. Co. (Air compressors), Mechanicsburg, Pa.
- Pottstown Machine Co. (Tapping machines), Pottstown, Pa.
- Powdered Coal Engineering & Equipment Co. (Coal dust burning appliances), 2401 Washington Blvd., Chicago.
- Powell Brass Mfg. Co. (Back water traps), Grand Rapids, Mich.
- ♦ **Powell, Wm., Co., The** (Engineering specialties), 2525 Spring Grove Ave., Cincinnati, O.; 145 W. 30th St., New York; 239-245 Causeway St., Boston; 419 Fulton St., Pittsburgh.  
(See index to advertisement, pages 7, 8 and 9.)
- Powell Machine Co., The (Metal working planers), 243 Stafford St., Worcester, Mass.; 29 Broadway, New York.
- Power-Glue Mfg. Co., The (Pulley covering), 417 S. Western Ave., Chicago, Ill.
- Power, L. & Co. (Woodworking mach'y), 20 S. 23d St., Philadelphia, Pa.
- Power Mfg. Co., The (Oil engines), Marion, O.
- Power Plant Specialty Co. (Steam and oil separators), 1306 Monadnock Bldg., Chicago, Ill.
- Power Specialty Co. (Steam superheaters, etc.), 111 Broadway, New York, N. Y.; Boston; Philadelphia; Chicago; San Francisco; Pittsburgh.
- Power Turbo Blower Co. (Power plant specialties), 350 Madison Ave., New York, N. Y.; 710 Wither- spoon Bldg., Philadelphia, Pa.; 140 S. Dearborn St., Chicago, Ill.
- Power & Mining Machinery Co. (Engines and mach'y), 115 Broadway, New York, N. Y. (Branches same as for Laidlaw-Dunn-Gordon Co.)
- Powers, J. P., Mfg. Co. (Plumbers' brass goods), 115 Main St., Ossining, N. Y.
- Powers Regulator Co. (Regulators, air compressors, etc.), 2781 Greenview Ave., Chicago, Ill.
- Powhatan Brass & Iron Works (Plumbing and steam specialties), Ranson, W. Va. Sales office: 340 Hudson St., New York.
- Prairie du Chien Tool Co. (Grinders), Prairie du Chien, Wis.
- Pratt Chuck Co., The (Chucks, etc.), Frankfort, N. Y.; 1123 Broadway, New York.
- Pratt Engineering & Machine Co. (Pumps, mach'y, etc.), Hurt Bldg., Atlanta, Ga.; 30 N. Michigan Ave., Chicago; 125 West 44th St., New York.
- Pratt, Wm. E., Mfg. Co. (Wrenches, jacks, belt hooks, etc.), State and Lake Bldg., Chicago, Ill.
- Pratt & Cady Co., Inc. (Valves), Hartford, Conn.; 259 Canal St., New York; 130 High St., Boston; 321 Third Ave., Pittsburgh; 252 W. Jefferson Ave., Detroit; 604 W. Lake St., Chicago; 507 Arch St., Philadelphia; Cleveland; San Francisco; Houston; Reading.
- Pratt & Whitney Co. (Metal working mach'y), Hartford, Conn.; 326 Hudson St., New York; Oliver Bldg., Boston; Washington and 21st St., Philadelphia; Frick Bldg., Pittsburgh; 573 Washington Blvd., Chicago; 516 N. 3d St., St. Louis; Kerr Bldg., Detroit; Rockefeller Bldg., Cleveland; 2015 1st Ave., Birmingham; 336 W. 14th St., Cincinnati, 16-18 Fremont St., San Francisco, Cal.; Seattle, Wash.; Denver, Colo.; St. Paul, Minn.
- ♦ **Precision Grinding Wheel Co., Inc.**, Philadelphia, Pa.
- Precision Instrument Co. (Recording instruments), 21 Halsey St., Newark, N. J.
- Precision & Thread Grinder Mfg. Co. (Grinding attachment), 1 South 21st St., Philadelphia, Pa.
- Precision Thermometer & Instrument Co. (Thermometers), 1434 Brandywine St., Philadelphia, Pa.
- Premier Electric Co. (Gear and wheel pullers), 3800 Ravenswood Ave., Chicago, Ill.
- Premium Metal & Packing Co., Inc. (Bearing metal), Wilkinsburg, Pittsburgh, Pa.; 150 Marietta St., Atlanta, Ga.; 207-208 Fifth Ave., Bay City, Mich.; 426 Plum St., Cincinnati, Ohio; Huntington, W. Va.; 40 East Kinzie St., Chicago, Ill.; 317 Magazine St., New Orleans, La.; 212 Summer St., Boston, Mass.; Tampa and Washington Sts., Tampa, Fla.; Gay Bldg., St. Louis, Mo.; and 105 Julia St., Jacksonville, Fla.
- Prentice, G. E., Mfg. Co. (Machinery guards), New Britain, Conn.
- Prentice, L. H., Co. (Heating specialties), 328 Sherman St., Chicago, Ill.
- Prentiss Vise Co. (Vises, etc.), 110 Lafayette St., New York, N. Y.; Watertown, N. Y.
- Presbrey Stove Lining Co. (Fire brick, etc.), Taunton, Mass.
- Prescott Co., The (Power transmission mach'y), Menominee, Mich.; 119 Jackson St., Seattle.
- Prescott, J. B., & Son (Garbage burners), Webster, Mass.
- Pressed Metal Machinery Co. (Riveting machines), 15 S. Clinton St., Chicago, Ill.
- Pressed Metal Radiator Co. (Radiators, etc.), Oliver Bldg., Pittsburgh, Pa.; 101 Park Ave., New York; 216 E. 10th St., Kansas City, 301 Maritime Bldg., Seattle; 607 Chemical Bldg., St. Louis; 64, 124 Milk St., Boston; 902 Citizens Bank Bldg., Cleveland; 503 First Nat'l Bank Bldg., Cincinnati.
- Pressed Steel Car Co., Farmer's Bank Bldg., Pittsburgh, Pa.; 24 Broad St., New York; Peoples Gas Bldg., Chicago, Ill.
- Pressed Steel Mfg. Co. (Ball bearings), 504 Land Title Bldg., Philadelphia, Pa.
- Pressed Steel Tank Co. (Tanks, boilers, etc.), Greenfield Ave., Milwaukee, Wis.; 208 South LaSalle St., Chicago, Ill.; Queen & Crescent Bldg., New Orleans; Woolworth Bldg., New York; Mills Bldg., San Francisco.
- Prest-O-Lite Co., The (Welding apparatus), Indianapolis, Ind.; Atlanta; Baltimore; Boston; Buffalo; Chicago; Cincinnati; Cleveland; Dallas; Davenport; Denver; Des Moines; Detroit; Indianapolis; Indian Orchard, Mass.; Jacksonville; Kansas City; Los Angeles; Memphis; Milwaukee; Minneapolis; New York; Omaha; Philadelphia; Pittsburgh; St. Louis; St. Paul; San Antonio; San Francisco; Seattle; Syracuse.
- Preston Co., Inc., Horace G. (Packings, washers, etc.), 2581 Beecher Ave., Detroit, Mich.
- Pribnow Swage & Tool Works (Swages), Sheboygan, Wis.
- Price Electric Co. (Pyrometers), 12363 Euclid Ave., Cleveland, Ohio.
- Price, G. W., Pump & Engine Co. (Pumps and engines), 33 Stevenson St., San Francisco, Cal.
- Pridmore, Henry E. (Molding machines), 19th and Rockwell Sts., Chicago, Ill.
- Prier Brass Mfg. Co. (Plumbing brass goods), 15th St. and Blue River Blvd., Kansas City, Mo.
- Priggen, Geo. H., Co. (Steel cabinets), 318 Dover St., Boston, Mass.
- Priestman, Albert (Sewage disposal apparatus), Philadelphia, Pa.
- Proctor & Schwartz, Inc. (Veneer dvers, etc.), 7th and Tabor Road, Philadelphia; Chicago; Charlotte, N. C.; New York; Providence; Pittsburgh.
- Procutier, William L. (Tapping attachments), 18 S. Clinton St., Chicago, Ill.
- Production Machine Co. (Polishing machines), Greenfield, Mass.



- Production Tool Co. of America (Milling cutters), Foster and LeGrand, Detroit, Mich.
- Progressive Mfg. Co. (Marine engines), Torrington, Conn.
- Pro-motor Fabricating Corp. (Pumps), 182 Locust Ave., New York, N. Y.
- Prospect Boiler Co. (Tanks and boilers), Codwise Ave. and Power St., New Brunswick, N. J.
- Prosser, Thomas, & Son (Boilermakers' tools), 15 Gold St., New York, N. Y.
- Protected Seat Valve Co. (Globe valves), Peoples Bank Bldg., Pittsburgh, Pa.
- Protecto Safety Appliance Co., The (Ammonia helmets), 50 Columbia St., Newark, N. J.; 35 N. Dearborn St., Chicago.
- Providence Engineering Corp. (Engines), 521 S. Main St., Providence, R. I.; Hudson Terminal Bldg., New York.
- Providence Fittings Co., The (Pipe fittings), 7 Water St., Boston.
- Providence Steam Trap Co. (Steam specialties), 16 Diamond St., Providence, R. I.
- Provost Engineering Corp. (Packing steam separators), Eagle and Provost Sts., Brooklyn, N. Y.
- Prox, Frank Co. (Water heaters, etc.), 1201 S. First St., Terre Haute, Ind.
- St., Terre Haute, Ind.: 401 Jacobson Bldg., Denver; 210 Security Bldg., Davenport; Hubbell Bldg., Des Moines; 901 Gerke Bldg., Cincinnati, 512 Board of Trade Bldg., Indianapolis.
- Prudential Heater Co. (Heating boilers), Louisville, Ky.
- Pruyn & Blodeau (Screw presses), 1876 Broadway, New York, N. Y.
- Prybitt, P., Machine Co., Inc. (Power transmission and woodworking mach'y), 512-24 W. 41st St., New York, N. Y.
- Puffer, W. E., & Sons (Furnace regulators), 234 Water St., New York City.
- Puget Sound Machinery Depot (Mach'y), 318-32 First Ave., Seattle, Wash.
- Puget Sound Metal Works (Bearing metal), St. Paul Ave., Tacoma, Wash.
- Pulaski Foundry & Machine Co. (Mining equipment), Pulaski, Va.
- Pullman Ventilator & Mfg. Co., The (Ventilators), York, Pa. (Branches in all cities.)
- Pull-U-Out Products Co. (Tackle blocks), 727 Clark Ave., St. Louis, Mo.
- Pulsometer Steam Pump Co. (Steam pumps), 220 W. 42d St., New York, N. Y.
- Pulte-Korreck Machine Co. (Dies and mach'y), 231 Ionia Ave., N. W., Grand Rapids, Mich.
- Punxsutawney Foundry & Machine Co. (Mine cars), Punxsutawney, Pa.
- Puro Sanitary Drinking Fountain Co. (Drinking fountains), Haydenville, Mass.
- Purves Mfg. Corp. (Oil cups, etc.), 311 Almond St., Syracuse, N. Y.
- Putnam Foundry & Machine Co., The (Heating boilers), 1 Furnace St., Putnam, Conn.; Worcester, Mass.
- ♦ Pyott, Geo. W., Co. (Power transmission mach'y), 1401 W. North Ave., Chicago, Ill.
- Pyott Foundry Co. (Iron pulleys, sheaves and wheels), 328 N. Sangamon St., Chicago, Ill.
- Pyramid Gate Bar Co. (Gate bars), 42d St. Bldg., New York City.
- Pyrene Mfg. Co. (Fire extinguishers), 17 East 49th St., New York, N. Y.; Atlanta, Ga.; Chicago, Ill.; Kansas City, Mo.; San Francisco, Calif.
- Pyroelectric Instrument Co. (Pyrometric instruments), 636 E. State St., Trenton, N. J.
- Q
- Quadrige Mfg. Co., The (Blow torches, washers, etc.), 213 W. Grand Ave., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Quaker City Cordage Co. (Cordage), 416 Walnut St., Philadelphia.
- ♦ Quaker City Rubber Co. (Hose, belting, packing, etc.), 629 Market St., Philadelphia, Pa.; 211 Wood St., Pittsburgh; 53 Murray St., New York; 182 W. Lake St., Chicago.
- Quaker Mfg. Co. (Heating furnaces and specialties), 140 N. Dearborn St., Chicago; Chicago Heights, Ill.
- Quality Saw & Tool Works, Inc., The (Saws), Springfield, Mass.
- Queen City Machine Tool Co. (Shapers), Sycamore and Webster Sts., Cincinnati, O.
- Queen-Gray Co. (Pyrometers, thermometers, etc.), 64 West Johnson St., Philadelphia, Pa.
- Quick Meal Stove Co., Division American Stove Co. (Plumbers' furnaces), 825 Chouteau Ave., St. Louis, Mo.
- Quick Chape Chuck Mfg. Co. (Chucks), Arcanum, Ohio.
- Quick & Thomas Co. (Gas engines), 122 Clark St., Auburn, N. Y.
- Quick Unloading Car Chute Co. (Railway car unloaders), 806 Title Bldg., Birmingham, Ala.
- Quickwork Co., The (Sheet metal machinery), St. Marys, O.
- Quigley Furnace Specialties Co. (Fire brick cement), 26 Cortlandt St., New York, N. Y.
- Quinby, J. L., Co. (Boiler compound), 278 Water St., New York, N. Y.
- Quimby, Wm. E., Inc. (Pumps), 548 W. 23d St., New York, N. Y.
- Quincy Engine Co. (Air and gas compressors), Quincy, Pa.
- Quinn Bros. (Ship ventilators), 9 Fair St., Paterson, N. J.
- Quinn Supply Co. (Closet tanks and valves), 29-31 S. Western Ave., Chicago, Ill.
- Quinn, Wm. E., Co. (Circular and band saws), Northampton, Mass.
- Quinn & Co. (Furnaces and grates), 713 E. 3d St., Cincinnati, O.
- Quint, A. D. (Metal working mach'y), 8 Clinton St., Hartford, Conn.
- R
- Raban, W. A. (Vehicle washers), Broad St., Port Chester, N. Y.
- Rabe Pipe & Foundry Co., Inc. (Cast iron plumbing goods), P. O. Box 331, Chattanooga, Tenn.
- Racine Iron & Wire Works (Hose clamps), Racine, Wis.
- Racine Metal Cutting Machine Co. (Hack saw machines), 317-335 Wisconsin St., Racine, Wis.
- Racine-Sattley Co. (Gas engines), Racine, Wis.; Springfield, Ill.
- Racine Tool & Machine Co. (Tools), 1439 Junction Ave., Racine, Wis.
- Racine Universal Motor Co. (Electric motors), 53 W. Jackson Blvd., Chicago, Ill.; 215 Fourth Ave., New York.
- Radiator Footwarmer Co. (Radiator footwarmers), 101 E. State St., Ithaca, N. Y.
- Rado Co., The (Radiator valves), 194 Reed St., Milwaukee, Wis.
- Rahmann, Geo., & Co. (Leather belting), 31 Spruce St., New York, N. Y.; Philadelphia.
- Rahn-Larmon Co., The (Lathes), Spring Grove Ave. and Garrard St., Cincinnati, O.
- Railway Roller Bearing Co. (Roller Bearings), Syracuse, N. Y.
- Raleigh Iron Works Co. (Sawmill mach'y, etc.), Raleigh, N. C.
- Ramsay, Andrew, Co. (Water closet tanks), Mt. Savage, Md.
- Randall Control & Hydrometric Corp. (Irrigation meters), 523 Central Bldg., Los Angeles, Calif.
- Randall-Faichney Co., Inc., The (Grease guns), 123 Heath St., Roxbury, Boston 20 Mass.
- Randall Graphite Products Corp. (Graphite lubricators), 711-721 Fulton St., Chicago, Ill.
- Randall Tramrail Co. (Overhead trolleys), 331 N. 2d St., Philadelphia, Pa.
- Randle Machinery Co., The (Injectors, ejectors, etc.), C. H. & D. R.R. and Powers St., Cincinnati, O.
- Randolph-Clowes Co., The (Brass and copper), Waterbury, Conn.; 253 Broadway, New York.
- Randall, J. D., Co., The (Leather splitting machines), 610 W. Court St., Cincinnati, O.
- Ranville, F., Co. (Leather belting, belt dressing, etc.), 241-243 Pearl St., Grand Rapids, Mich.; 523 Eighth Ave., New York; 170 Summer St., Boston, 9 Mass.; 208 N. Wabash Ave., Chicago, Ill.
- Ransom Mfg. Co. (Grinding and polishing mach'y), Oshkosh, Wis.
- Ransome Concrete Machinery Co. (Concrete mixers), Dunellen, N. J.
- Rapid Safety Filter Co. (Water filters), 92 Pine St., New York, N. Y.
- Raquette Foundry & Supply Co. (Brass and iron castings), Massena, N. Y.
- Rateau Steam Regenerator Co. (Steam regenerators), 90 West St., New York, N. Y.
- Rath Manufacturing Co., Inc. (Metal polish), Hedley St. east of Richmond St., Philadelphia, Pa.
- Rathbun-Jones Engineering Co., The (Gas engines), Toledo, O.
- Rauch Mfg. Co., The (Oil and ore gates, hose couplings), Galena, Kan.
- Ravena Iron Works (Iron pipe fittings), Ravena, N. Y.
- Ravenswood Brass Foundry Co. (Bearing metal), 2437 Irving Park Blvd., Chicago.
- Rawlplug Co. (Screw anchors), 467 8th Ave., New York.
- Rawson, Frank C. Co., Inc. (File and tool handles), Winchendon, Mass.
- Raybestos Co., The (Brake lining), Bridgeport, Conn.; Chicago; Detroit; San Francisco; Washington, D. C.
- Raymond Bros. Impact Pulverizer Co. (Pulverizing mach'y), 1319 North Branch, Chicago, Ill.; Dehver; New York.
- Raymond Lead Works (Lead products), 735 S. Washtenaw Ave., Chicago, Ill.
- Raymond Mfg. Co., Ltd. (Springs), Corry, Pa.
- Raymond, W. S. (Pulley covering), Niles, Mich.
- Reading Chain & Block Corp. (Chain hoists), Reading, Pa.  
(See index to advertisement, pages 7, 8 and 9.)
- Reading Foundry & Supply Co. (Iron pipe and fittings), Reading, Pa.
- Reading Heater & Supply Co. (Steam heating appliances), Woodward and Church Sts., Reading, Pa.

- Reading Iron Co. (Pipe mach'y, etc.), Baer Bldg., Reading, Pa.; Philadelphia; New York; Boston; Pittsburgh; Chicago; Cincinnati; Fort Worth, Tex.; Los Angeles, Calif.
- Reading Scale & Machine Co. (Steam engines, power transmission mach'y, etc.), Reading, Pa.
- Reading Valve & Fittings Co. (Valves and fittings), Reading, Pa.; Boston; Hartford, Conn.; New York; Philadelphia; Pittsburgh; Cleveland; Detroit; Chicago; San Francisco; Houston.
- ◆ Reading Wood Pulley Co. (Pulleys), 11th and Muhlenberg Sts., Reading, Pa.
- Ready Tool Co., The (Lathe and clamp dogs), Bridgeport, Conn.
- Ready-Made Sign Co. (Metal signs), 18 West 36th St., New York.
- Rearwin, W. D. (Filing and grinding machines), 716 Monroe Ave., N. W., Grand Rapids, Mich.
- Rebele, L. J. (Washers, gaskets, etc.), 50 Church St., New York, N. Y.
- Rebsamen & Almeroth (Ice making machines), 2324 Elston Ave., Chicago, Ill.
- Red Chief Mfg. Co. (Corn shellers), Louisville, Ky.
- Red Cross Filter Co. (Water filters), 186 W. Washington St., Chicago, Ill.
- Red Cross Mfg. Co., The (Pumps and windmills), Bluffton, Ind.
- Red Jacket Mfg. Co. (Pumps, etc.), Davenport, Ia.
- Reddan Specialty Co. (Shower Baths), 25 W. Broadway, New York, N. Y.
- Redeker System Co., The (Water main cleaners), 2252 Main St., Wheeling, W. Va.
- Redin-Ekstrom & Co. (Hand metal punch), Rockford, Ill.
- Redington, F. B. Co. (Machine counters), 112 S. Sangamon St., Chicago, Ill.
- Redington Standard Fittings Co., Bethlehem, Pa.
- Redwood Manufacturers Co. (Wood pipe), 1600 Hobart Bldg., San Francisco, Cal.
- Reed & Duecker (Leather belting), 171-75 N. Main St., Memphis, Tenn.
- Reed, Francis Co. (Drills), 43 Hammond St., Worcester, Mass.
- Reed Hardware & Mfg. Co. (Lathes, gummers, guides), 1005 Ohio St., Cairo, Ill.
- ◆ Reed Mfg. Co. (Vises, reamers, etc.), Erie, Pa.
- Reed-Prentice Co. (Machine tools), 677 Cambridge St., Worcester, Mass.; 408 Frankfort Ave., Cleveland; 642 Beaubien, Detroit; Lemcke Annex, Indianapolis; Grand Central Palace, New York.
- Reed & Prince Mfg. Co. (Screw machine products), Worcester, Mass.
- Reed Small Tool Wks. (Calipers, etc.), Cherry and Vine Sts., Worcester, Mass.
- Reeves Hardware Mfg. Co. (Mitre clamps), 14 N. Des Plaines St., Chicago.
- Reeves Mfg. Co. (Gas meters), Milford, Conn.
- ◆ Reeves Pulley Co. (Pulleys), Columbus, Ind.; 39 S. Clinton St., Chicago, Ill.
- Reeves, Paul S. & Son (Brass and copper castings), 1415-25 Catherine St., Station D, Philadelphia, Pa.
- Re-Fill-It Broom Mfg. Co. (Factory brooms), 185 Devonshire St., Boston, Mass.
- Refinite Company, The (Water softener), Refinite Bldg., Omaha, Neb.; 908 S. Mich. Ave., Chicago; 2206 Jefferson Co. Bank Bldg., Birmingham; 30 Church St., New York; 413 Call Bldg., San Francisco.
- Regal Belting Co. (Leather belting), 2520-22 Spring Grove Ave., Cincinnati, O.
- Regal Gasoline Engine Co. (Gas engines), Coldwater, Mich.
- Regar Brass Mfg. Co., The (Plumbers' brass goods), 1523 E. 45th St., Cleveland, O.
- Reichhelm, E. P. & Co., Inc. (Sandblast machines, files), 24 John St., New York, N. Y.
- Reid Bros. Co., Inc. (Universal angle fixtures), 59 Park St., Beverly, Mass.
- Reid Brass Mfg. Co. (Lavatory and bath specialties), 595 Kent Ave., Brooklyn, N. Y.
- Reid, Joseph, Gas Engine Co. (Gas engines), Oil City, Pa.
- Reidy Machine Screw Co. (Pipe couplings), New Haven, Conn.
- ◆ Reiff & Nestor Co. (Taps and reamers), Lykens, Pa.; 243 W. Congress, Detroit, Mich.
- Reimers Mfg. Co. (Electric specialties), 517-523 W. 45th St., New York, N. Y.
- Reinhold Belting & Supply Co. (Leather belting), 491 Atlantic Ave., Brooklyn, N. Y.
- ◆ Reinhold Noflux Aluminum Solder Co. (Aluminum solder), 31 Clinton St., Newark, N. J.
- Reiter Boiler Cleaner Co. (Flue cleaners), Elgin, Ill.
- Reiter, G. C. (Gongs), Canton, O.
- Reliable Engine Co., The (Gas and traction engines), Portsmouth, O.
- Reliable Stove Co. (Division of American Stove Co.), Cleveland, O.; 315 S. Wabash Ave., Chicago; 718 Mission St., San Francisco; 737 Terminal St., Los Angeles; 152 W. 42nd St., New York.
- Reliable Tractor & Engine Co. (Engines), Portsmouth, Ohio.
- Reliance Electric & Engineering Co. (Electric motors), 1088 Ivanhoe Rd., Cleveland, O.
- Reliance Engineering Co. (Gas, gasoline engines), Lansing, Mich.
- ◆ Reliance Gauge Column Co., The (Steam specialties), 5902 Carnegie Ave., Cleveland, O.; 5 S. 18th St., Philadelphia, Pa.
- (See index to advertisement, pages 7, 8 and 9.)
- Reliance Manufacturing Co. (Gas regulators), Pasadena, Cal.
- Reliance Mfg. Co., The (Lock washers, nuts, etc.), Massillon, O.; Atlanta, Chicago, Cleveland, Detroit, Kansas City, New York, Philadelphia, San Francisco.
- Reliance Steel & Tool Co. (Twist drills), 24-26 Murray St., New York.
- Remick, T. & Co., Inc. (Waste), 200 Summer St., Boston, Mass.
- Remington Machine Co. (Refrigerating mach'y), Wilmington, Del.
- Remington Oil Engine Co., The (Oil engines), Stamford, Conn.
- Rempe Co. (Iron pipe coils), 341 N. Sacramento Ave., Chicago, Ill.
- Reno, J. W. & Co. (Mill and mine mach'y), Mills Bldg., San Francisco, Calif.
- Rensselaer Valve Co. (Valves), Troy, N. Y.; 50 Church St., New York; 1108-9 Monadnock Bldg., Chicago; Starks Bldg., Louisville; Oliver Bldg., Pittsburgh.
- Reordway, The Co. (Gage glass reflectors), Marquette Bldg., Chicago, Ill.
- Republic Brass Co., The (Plumbing brass goods), 1617 East 45th St., Cleveland, O.
- Republic Chemical Fire Engine Co. (Fire extinguishers), Urbana, Ill.
- Republic Flow Meters Co. (Steam meters), 2240 Diversey Blvd., Chicago, Ill.; Bush Terminal Bldg. No. 4, Brooklyn; 45 India St., Boston; Real Est. Trust Bldg., Philadelphia; 55 Conestoga Bldg., Pittsburgh; Detroit Savings Bank Bldg., Detroit; 145 Wellington W., Toronto; 501 So. 6th St., Minneapolis; 619 19th St., Denver; L. C. Smith Bldg., Seattle; 501 Lewis Bldg., Portland; 155 2nd St., San Francisco; 420 E. 3rd St., Los Angeles; 920 Empire Bldg., Birmingham; 1106 Waldheim Bldg., Kansas City.
- ◆ Republic Iron & Steel Co. (Bolts, nuts, etc.), Republic Bldg., Youngstown, O.; Birmingham, Chicago, New York, Buffalo, Dallas, Cleveland, St. Louis, Cincinnati, Pittsburgh, Philadelphia, Boston, Detroit, San Francisco.
- Republic Rubber Corp., The (Mechanical rubber goods), Youngstown, O.; New York, Pittsburgh, Atlanta, Dallas, Kansas City, Chicago.
- Republic Steel Package Co. (Bundling machines), 7930 Jones Rd., Cleveland, Ohio.
- Resolute Pottery Co. (Bowls, tanks, etc.), 3d and Landing Sts., Trenton, N. J.
- Rex File Co. (Files), Newcomerstown, O.
- Rex Fire Appliance Co. (Fire extinguishers), 310 West 39th St., New York, N. Y.; 114 Elm St., St. Louis, Mo.
- Rex Mfg. Co. (Tool posts), Hyde Park Dist., Boston, Mass.
- Reynolds Bros. (Files and rasps), 102 W. Spring St., Columbus, O.
- Reynolds Gas Regulator Co. (Gas regulators and governors), Anderson, Ind.
- Reynolds Machine Co., The (Screwdriving machines), Massillon, O.; 82 Walker St., New York, N. Y.; 549 Washington Blvd., Chicago, Ill.
- Reznor Mfg. Co. (Gas heaters, etc.), Mercer, Pa.
- Rhoads, J. E. & Sons (Leather belting), 12 N. 3d St., Philadelphia, Pa.; 102 Beekman St., New York; 322 W. Randolph St., Chicago; Wilmington, Del.
- Rhode Island Fittings Co. (Pipe unions), Hills Grove, R. I.
- Rhode Island Humidifier Co. (Humidifiers), Boston, Mass.
- Rhode Island Warp Stop Equipment Co. (Counter-shafts and belt shifters), 248 Pine St., Pawtucket, R. I.; 10 E. 6th St., Charlotte, N. C.
- Rhode Island Washer Co. (Washers), Valley Falls, R. I.
- Rhodes Bros. Co. (Radiators), Collingdale, Pa.
- Rhodes Mfg. Co. (Water motors, etc.), Hartford, Conn.
- Ribble-Thatcher Co., The (Stall fittings), Bangor, Pa.
- Rice, Edward J., Mfg. Co. (Plumbing fittings), 203 W. Main St., Rochester, N. Y.
- Rice, Barton & Fales Machine & Iron Co. (Paper and pulp mill machinery), Worcester, Mass.
- Rich Mfg. Co. (Oil cups), 370 Atlantic Ave., Boston, Mass.
- Rich Tool Co. (Twist drills and reamers), Railway Exchange, Chicago, Ill.; Pittsburgh; Philadelphia; Cleveland; St. Louis; St. Paul; Houston; Portland; Seattle; San Francisco.
- Richards, Benjamin & Co., The (Screws, nuts, washers), Winsted, Conn.
- Richards & Co. (Babbitt metals), 200 Causeway St., Boston, Mass.



- Richards, G. Whitfield (Drilling compounds), 1732-35 Carlton St., Philadelphia, Pa.  
 Richards Machine Co. (Drilling machines), 3417-19 Vliet St., Milwaukee, Wis.  
 Richards Mfg. Co. (Pipe covering), 325 Scribner Ave., Grand Rapids, Mich.  
 Richards-Wilcox Mfg. Co. (Grinders, wrenches, etc.), Aurora, Ill.; 166 W. Lake St., Chicago; 457 Hippodrome Annex, Cleveland; 40 West Ohio St., Indianapolis; Cleveland; London, Ontario; Canada; Montreal.  
 (See index to advertisement, pages 7, 8 and 9.)  
 Richardson, Edro, Brass Co. (Plumbing brass goods), 318 N. Holliday St., Baltimore, Md.  
 (See index to advertisement, pages 7, 8 and 9.)  
 ♦ Richardson-Phenix Co., The (Oiling systems), 122 Reservoir Ave., Milwaukee, Wis.; 30 E. 42d St., New York, N. Y.; 2041 E. 3d St., Cleveland, O.  
 Richardson Scale Co. (Scales), 30 Church St., New York; 209 S. State St., Chicago.  
 Richmond Belt Dressing Mfg. Co., Richmond, Va.  
 Richmond Foundry & Mfg. Co., The (Hydrants, stands, brackets, etc.), Richmond, Va.  
 Richmond Metal Products Co., Inc. (Drilling machines), 5th and Arch Sts., Richmond, Va.  
 Richmond Radiator Co., The (1480 Broadway, New York, N. Y.)  
 Richmond Safety Gate Co. (Elevator gates), Richmond, Ind.  
 Richmond Sanitary Mfg. Co. (Plumber's woodwork, etc.), 441-443 Second St., San Francisco, Cal.  
 Richmond Screw Anchor Co. (Anchor screws), 419 Pulitzer Bldg., New York, N. Y.  
 Richmond Water Softener Co. (Water softeners), 12th and N. C. Sts., Richmond, Ind.  
 Richter & Co., The (Plumbing brass goods), 210 9th Ave., E., Cincinnati, O.  
 Rickersberg Brass Co. (Cocks), Perkins Ave. and East 37th St., Cleveland, O.  
 Rickert-Shafer Co. (Precision tools), Erie, Pa.  
 Rider-Ericsson Engine Co. (Pumps and engines), Walden, Orange Co., N. Y.; 20 Murray St., New York; 522 Lafayette Bldg., Philadelphia.  
 Gray's Ferry Road and Grove St., Philadelphia, Pa.  
 Ridgway Dynamo & Engine Co., The (Steam engines, etc.), Ridgway, Pa.; Boston; New York; Washington; Wilkes-Barre; Pittsburgh; Cleveland; Louisville; Chicago; St. Louis; Kansas City; St. Paul; Denver; Seattle; San Francisco; Dallas; New Orleans.  
 Ridgway, C., & Son Co. (Elevators), Coatesville, Pa.  
 Riehle Brothers Testing Machine Co. (Testing machines), 1424 N. 9th St., Philadelphia, Pa.  
 Rife Hydraulic Engine Mfg. Co. (Hydraulic engines), 90 West St., New York, N. Y.  
 Rigid Tool Holder Co. (Machinists tools), Washington, D. C.  
 Rinald Bros. Paint Works, Inc. (Bath tub enamel), 1142 Hancock St., Philadelphia, Pa.; 253 Broadway, New York.  
 Ripley, Lewis R. (Lathes), 29 Cleghorn St. and Fairmount Pl., Fitchburg, Mass.  
 Ripley Pipe Wrench Co. (Pipe wrenches), Ripley, N. Y.  
 Ritchie-Wertz Co., The (Work benches), Dayton, O.  
 Riter-Conley Co. (Steel construction), Pittsburgh, Pa.; New York; Washington, San Francisco, Chicago, Boston, Philadelphia, Seattle, Syracuse, Cleveland, Cincinnati, Detroit.  
 Ritz Chemical Corp. (Pipe cleaners), 25 Division Pl., Newark, N. J.  
 Riverside Boiler Works, Inc. (Boilers, etc.), 491 Main St., Cambridge, Mass.; 45 East 17th St., New York; 1624 S. Clark St., Chicago.  
 Riverside Foundry & Galvanizing Co. (Plumbing specialties), Kalamazoo, Mich.  
 Riverside Machine Co. (Machines, pipe bending), Chester, Pa.  
 Riverside Mfg. Co. (Damper regulator), 162 Riverside Ave., Newark, N. J.  
 Riverside Metal Co. (Metals), Riverside, N. J.  
 Riverside Metal Refining Co. (Soldier, babbitt, copper ingots), Connelleville, Pa.  
 Rivet Cutting Gun Co. (Slag and rivet cutters), 116 E. 3d St., Cincinnati, O.; Chicago; Pittsburgh; Boston; Detroit; New York; Richmond, Va.; Niagara Falls; San Francisco; St. Paul; St. Louis; Montreal; Winnipeg.  
 Rivetless Chain & Engineering Co. (Drop forgings), Avon, Pa.  
 Rivett Lathe & Grinder Co. (Metal working mach'y), Brighton, District of Boston, Mass.  
 Roach Stoker Company (Foundry moulding machines), 731 Presser Bldg., Philadelphia.  
 Roath Mfg. Co. (Vapor heating specialties), Cherry & Canal Sts., Akron, O.  
 Robbins, Gamwell & Co. (Wrenches), 68 West St., Pittsfield, Mass.  
 Robbins Machine Co., The (Lathes), Worcester, Mass.  
 Robbins & Myers Co., The (Motors and fans), Springfield, O.; 30 Church St., New York; 201 Devonshire St., Boston; 1418 Walnut St., Philadelphia; 831-33 Ellicott Square Bldg., Buffalo; 406-7-8 Marshall Bldg., Cleveland; 821-22 Union Central Bldg., Cincinnati, O.; 1522-24 Chemical Bldg., St. Louis; 1444-48 Conway Bldg., Chicago; 702 Rialto Bldg., San Francisco.  
 Roberts Brass Company (Valves), 249 Lake St., Milwaukee, Wis.  
 Roberts Brass Mfg. Co., The (Gas and plumbing fittings), 5401 W. Fort St., Detroit, Mich.  
 Roberts, Geo. J., Co., The (Electric pumps), Dayton, O.  
 Roberts Filter Mfg. Co. (Water filters), Darby, Pa.; Flatiron Bldg., New York.  
 Roberts-Hamilton Co. (Boilers and furnaces), 413 S. 4th St., Minneapolis, Minn.  
 Roberts Mfg. Co. (Pipe fittings), 106 S. Tennessee Ave., Atlantic City, N. J.  
 Roberts Mfg. Co. (Bolt clippers), Somerville, Mass.  
 Roberts Motors, The (Gas engines), Sandusky, O.  
 Roberts Portable Oven Co. (Enameling ovens), 853 W. North Ave., Chicago, Ill.  
 Roberts Safety Water Tube Boiler Co. (Boilers), 102-18 Chestnut St., Red Bank, N. J.  
 Roberts Steam Specialty Co. (Water columns, etc.), 5318 St. Clair Ave., Cleveland, O.  
 Roberts Tube Works (Copper and brass tubing), 2500 Military, Detroit, Mich.  
 Robertshaw Mfg. Co. (Plumbing and heating specialties), Youngwood, Pa.; 30 Church St., New York; 15 Charter Oak Pl., Hartford, Conn.; 327 S. La Salle St., Chicago; 1904 Olive St., St. Louis; 126 Russ Bldg., San Francisco.  
 Robertson Bros. Mfg. Co. (Steel pipe), 5401 Western Ave., Chicago, Ill.  
 Robertson, H. H., Co. (Roofing), First Nat. Bank Bldg., Pittsburgh, Pa.; Baltimore; Birmingham; Boston; Buffalo; Chicago; Cleveland; Detroit; New York; St. Louis; San Francisco; Allentown, Pa.; Indianapolis; Denver; Salt Lake City; Kansas City; Minneapolis; Nashville; New Orleans; Seattle; Portland; Denver; Philadelphia.  
 Robertson, James L., & Sons (Steam specialties), 78-80 Murray St., New York, N. Y.  
 Robertson, James, Lead Co. (United Lead Co.), 827 S. Howard St., Baltimore, Md.  
 Robertson, James, Mfg. Co., The (Water closet combinations), 106-108 Hopkins Pl., Baltimore, Md.; Main and Vine Sts., Richmond, Va.  
 Robertson, John F., Co. (Valves and extractors), 1001 Park Bldg., Pittsburgh, Pa.  
 Robertson, W. Machinery & Foundry Co. (Hack saws), 56-58 Rano St., Buffalo, N. Y.  
 Robertson Mfg. Co. (Hack saws), 1443-1453 Niagara St., Buffalo, N. Y.  
 Robertson, Theo. B., Products Co., Inc. (Soaps and disinfectants), 700-704 W. Division St., Chicago, Ill.  
 Robins Conveyor Belt Co. (Elevating and conveying mach'y), Park Row Bldg., New York, N. Y.; Old Colony Bldg., Chicago; 70 Kilby St., Boston; Union Arcade Bldg., Pittsburgh.  
 Robinson, D., & Sons (Wiping cloths), 3622 Hastings St., Detroit, Mich.  
 Robinson Mfg. Co., The (Pipe hangers, clamps, etc.), 8123 Bruner Ave., S.E., Cleveland, O.  
 Robinson Mfg. Co. (Flour mill mach'y), Muncy, Pa. Branch Offices or Stores: 415 Western Union Bldg., Chicago, Ill.; 3325 Archwood Ave., Cleveland, Ohio; 39 Cortland St., New York City; 79 Milk St., Boston, Mass.; 459 "L" St. N. E., Minneapolis, Minn.; 267 Elmwood Ave., Buffalo, N. Y.; 117 W. Oak St., Louisville, Ky.; 1320 Healey Bldg., Atlanta, Ga.  
 Robinson, J. M., Mfg. Co., The (Molding machines), 3288 Spring Grove Ave., Cincinnati, O.  
 ♦ Robinson, M. W., Co. (Tool handles), 296 Broadway, New York, N. Y.  
 Robinson Packer Co. (Packers, oil and gas well), Tulsa, Okla.; Coffeyville, Kans.  
 Robinson Peerless Granite Tub Co. (Plumbing goods), 4513 Hudson Co. Blvd., Weehawken, N. J.  
 Robinson Stoneware Co., 244-254 Greenpoint Ave., Brooklyn, N. Y.  
 Robinson, T. J. Smoke Consumer Co. (Smoke consumers), 643 W. Washington St., Chicago, Ill.  
 Robinson Tool Works, Inc., The (Filing machines), Baldwin St. and Kelsey Ave., Waterbury, Conn.  
 Robinson Ventilating Co. (Ventilating fans), 8044 Jenkins Arcade Bldg., Pittsburgh.  
 Robinson, Wm. C., & Son Co. (Lubricants), 32 South St., Baltimore, Md.; Boston, Charlotte, N. C.; New York, Philadelphia, Pittsburgh, Syracuse, Utica, N. Y.  
 Robinson, Wm. V., Co., The (Polishing machines), Owosso, Mich.  
 Robson Mfg. Co. (Emery wheel dressers), 146 S. Kellogg St., Galesburg, Ill.  
 Rochester Ball Bearing Co., Inc. (Ball bearings), 2040 East Ave., Rochester, N. Y.  
 Rochester Can Co. (Sheet metal goods), Rochester, N. Y.  
 Rochester Chemical Co. (Metal polish), Rochester, N. Y.  
 Rochester Gas Engine Co. (Gas engines), Rochester, N. Y.  
 Rochester Germicide Co. (Drinking fountains and disinfectors), Rochester, N. Y.; Boston, Chicago, New York, Pittsburgh, Cleveland, Cincinnati, St. Paul, Toronto.

- Rochester Lead Works (Lead), 380 Exchange St., Rochester, N. Y.
- Rochester Machine Screw Co. (Machine screw products), Rochester, N. Y.
- Rochester Motors Corp., Inc. (Fans, motors and dynamos), 634 Lexington Ave. and Wren St., Rochester, N. Y.
- Rochester Spray Pump Co. (Spray pumps), 179 Broadway, Rochester, N. Y.
- Rochester Vacuum Valve Co. (Vacuum valves, etc.), 404-5 Cox Bldg., Rochester, N. Y.
- Rochester Woven Belting Corp. (Cotton belting), E. Rochester, N. Y.
- Rockford Bolt Co. (Bolts and washers), 60 Mill St., Rockford, Ill.
- Rockford Drilling Machine Co. (Drilling machines), Rockford, Ill.
- Rockford Iron Works (Power presses), Rockford, Ill.
- Rockford Lathe & Drill Co. (Lathes), 1827 14th Ave., Rockford, Ill.
- Rockford Leather Washer Co. (Washers, packing etc.), 100 Forbs St., Rockford, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Rockford Machine Tool Co. (Metal working mach'y), Rockford, Ill.
- Rockford Metal Specialty Co. (Countershafts), 610 Cedar St., Rockford, Ill.
- Rockford Milling Machine Co. (Milling machines), Rockford, Ill.
- Rockford Mitre Box Co. (Boxes, clamps, saws, vises), Rockford, Ill.
- Rockford Tool Co. (Mach'y), 1480 Harrison Ave., Rockford, Ill. Factory, 2313 11th St.
- Rockford Twist Drill Co. (Drills), Rockford, Ill.
- ◆ Rock Island Mfg. Co. (Vises), Rock Island, Ill.; 113 Chambers St., New York; 516 Mission St., San Francisco.
- Rock River Machine Co. (Punching and shearing machines), Janesville, Wis.
- Rockwell Furnace Co. (Furnaces, etc.), 105 West 40th St., New York, N. Y.
- Rockwell, W. S., Co. (Blowers), 50 Church St., New York, N. Y.; Ellsworth Bldg., Chicago; Hickox Bldg., Cleveland; Majestic Bldg., Detroit.
- Rockwood Mfg. Co., The (Paper pulleys), 1801-2001 English Ave., Indianapolis, Ind.
- Rockwood Sprinkler Co. (Automatic sprinklers), 3610 S. Morgan St., Chicago, Ill.
- Rockwood Sprinkler Co. of Massachusetts (Combination pressed steel and bronze pipe unions), 34-56 Harlow St., Worcester, Mass.; 123 William St., New York; 141 Milk St., Boston; 444 Prudential Bldg., Buffalo; 205 Columbia St., Seattle; 1310 Congress Ave., Houston.
- Rodd, Robert J. (Nug tappers), Cuyahoga Falls, O.
- Rodefald Mfg. Co. (Gas engines, pipe cutters), Richmond, Ind.
- Rodgers-Collins Co., The (Boiler metal treatment), 7 Pontiac Bldg., St. Louis, Mo.
- Roebbling's, John A., Sons Co. (Wire rope, etc.), Trenton, N. J.; 117 Liberty St., New York; 165 W. Lake St., Chicago; 627 Market St., Philadelphia; 701 St. Clair Ave., N.E., Cleveland; Market and Alameda Sts., Los Angeles; 900 First Ave., Seattle; 624 Folsom St., San Francisco; 89 Fifth St., Portland, Ore.
- Roeper Crane & Hoist Works (Cranes and hoists), Reading, Pa.
- Roessing Manufacturing Co. (Pipe coils and bends), Sharpsburg Station, Pittsburgh, Pa.
- Rogers Eagle Machine Works (Knife grinders), 16-20 Elk St., Buffalo, N. Y.
- Rogers Faucet Co., The (Plumbers' brass goods), 36 River St., Bridgeport, Conn.
- Rogers Fibre Co. (Box trucks), 121 Beach St., Boston, Mass.; New York, Philadelphia.
- Rogers, E. A., Co. (Gauge glasses), 87 Walker St., New York, N. Y.
- (See index to advertisement, pages 7, 8 and 9.)
- Rogers Machine Tool Co., Inc. (Turret machines), Alfred, N. Y.
- Rogers Metal Works (Babbitt metal), 2123 Jefferson St., Kansas City, Mo.
- Rogers, S. C., & Co. (Knife grinders), 10 Lock St., Buffalo, N. Y.
- Rogers, John M., Works, Inc., The (Reamers and milling tools), Gloucester City, N. J.
- Rohn, William M. (Rust dissolver), 5809 Hough Ave., Cleveland, O.; 5626 Broadway, Chicago, Ill.
- Roller Bearings Mfg. Co., The (Roller bearings), East Orange, N. J.
- Roller-Smith Co. (Electrical instruments), 233 Broadway, New York, N. Y.
- Rollins Engine Co., The (Steam engines), 29 Mason St., Nashua, N. H.
- Rome Brass & Copper Co. (Brass and copper goods), Rome, N. Y.; 119 N. Market St., Chicago; 277 Broadway, New York; Wells Fargo Bldg., San Francisco.
- Rome Hollow Wire & Tube Co. (Tubing), Rome, N. Y.
- Rone Mfg. Co. (Brass and copper tubing), Rome, N. Y.
- Rome Soil Pipe Mfg. Co. (Pipe and fittings), Rome, Ga.
- Rome-Turney Radiator Co. (Steam condensers), Rome, N. Y.
- Romer Axe Co. (Axes), Dunkirk, N. Y.
- Romort Mfg. Co. (Garage appliances), Oakfield, Wis.; 1323 Mich. Ave., Chicago, Ill.
- Rooksby, E. J., & Co. (Boring bars), 1042 Ridge Ave., Philadelphia, Pa.
- Root, B. M., Co. (Woodworking mach'y), York, Pa.
- Root, C. J., Co., The (Revolution counters), Bristol, Conn.
- Roots, P. H. & F. M., Co. (Pumps), Connersville, Ind.; 120 Liberty St., New York; 432 Peoples Gas Bldg., Chicago, Ill.
- Roovers Bros. (Embossing presses), 100 Schermerhorn St., Brooklyn, N. Y.
- Rope Fire Escape Co. (Fire escapes), 1628 Market St., Philadelphia, Pa.
- Rose, Frank, Mfg. Co. (Auto accessories), Hastings, Neb.
- Rose Mfg. Co. (Acetylene gas generators), 37th and Filbert Sts., Philadelphia, Pa.
- Rose Valley Shops (Leather belting), Moylan-Rose Valley, Pa.
- Rosedale Foundry & Machine Co. (Mechanical stokers, sue cleaners, etc.), North Side, Pittsburgh, Pa.
- Ross Heater & Mfg. Co., Inc. (Feed water heaters), 1407 West Ave., Buffalo, N. Y.; 412 Century Bldg., Cleveland, Ohio; Pennsylvania Bldg., Philadelphia, Pa.; 521 Equitable Bldg., Baltimore, Md.; 115 Bay St., Toronto, Ontario; 95 Liberty St., New York City; Smith Bldg., Seattle, Wash.; 1101 Hennen Bldg., New Orleans, La.; 1522 Candler Bldg., Atlanta, Ga.; 1830 Lytton Bldg., Chicago, Ill.; 900 Hibernian Bank Bldg., Los Angeles, Calif.; 510 Hastings St. W., Vancouver, B. C.; 415 Rialto Bldg., San Francisco, Calif.; 201 Devonshire St., Boston, Mass.; Railway Exchange Bldg., St. Louis, Mo.; 205 Scarritt Bldg., Kansas City, Mo.; 1226 First National Bank Bldg., Milwaukee, Wis.; Oliver Bldg., Pittsburgh, Pa.; 1207 Gasco Bldg., Portland, Ore.; First National Bank Bldg., Denver, Col.; 412-418 Templeton Bldg., Salt Lake City, Utah.
- Ross, J. J., Mill Furnishing Co., Portland, Ore.; Seattle, Wash.
- Ross Mfg. Co., The (Feed water heaters), Northville, Mich.
- Ross Mfg. Co., The (Emery wheel dressers), 3160 W. 106th St., Cleveland, O.
- Ross Supply Co. (Windmills, iron fittings, etc.), Greenville, O.
- Ross Valve Mfg. Co., Inc. (Steam and hydraulic specialties), Oakwood Ave., Troy, N. Y.
- Ross & Gade Co., Inc. (Plumbing brass goods), 507 W. 45th St., New York.
- ◆ Rossendale-Reddaway Belting & Hose Co., The (Belting, etc.), Euclid Ave., Newark, N. J.; San Francisco.
- Rotary Meter Co. (Gas meters), 52 Vanderbilt Ave., at E. 45th St., New York, N. Y.
- Rotary Mfg. Co. (Water heaters), 9th St. and Santa Fe Ave., Los Angeles, Cal.
- Rotax Company, Inc. (Water coolers), 380 E. 133d St., New York, N. Y.
- Roth Bros. & Co. (Electric motors), 1400 W. Adams St., Chicago, Ill.
- Rothfuss-Howard Iron Works (Saw sharpeners), Williamsport, Pa.
- Roto Co., The (Boiler tube cleaners), 67 Temple St., Hartford, Conn.; 1460 Monadnock Bldg., Chicago, Ill.
- Round, David, & Son (Chain hoists), Stop 2, A. B. C. R. R., Cleveland, O.
- Routh Metals Co. (Metal goods), Newark, N. J.
- Rover, A. B. (Water motors), Binghamton, N. Y.
- Row & Davis, Engineers, Inc. (Evaporators and heaters), 90 West St., New York City.
- Rowbottom Machine Co. (Mach'y), Waterbury, Conn.
- Rowe, A. C., & Son (Buckets, hose and cans), 78 Reade St., New York.
- Rowe, Henry, Mfg. Co. (Tables, benches and trucks), Newaygo, Mich.
- Rowe, L. L. (Damper regulators, gas burners), 74 Portland St., Boston, Mass.
- Rowe Mfg. Co. (Sack balers), Galesburg, Ill.
- Rowe Sanitary Mfg. Co. (Lavatories), 676 W. Grand Blvd., Detroit, Mich.; 140 Franklin St., New York.
- Rowell, G. D., & Son (Car movers), Appleton, Wis.
- Rowell Mfg. Co. (Melting furnaces), Appleton, Wis.
- Roy, B. S., & Son (Portable grinders), Worcester, Mass.
- Royal Brass Mfg. Co., The (Plumbing specialties), 1418 E. 43d St., Cleveland, O.; 2240 Ryer Ave., New York City.
- Royal Mfg. Co. (Cotton and wool waste) 30 East Grand St., Rahway, N. J.; 321 E. Grand Ave., Chicago; 2 Rector St., New York; 615 Terry Bldg., Roanoke, Va.; 200 Summer St., Boston.
- Royal Safety Anchor Co. (Window washers' belts), 62-64 W. Washington St., Chicago.
- Royal Ventilator Co. (Ventilators), 415 Locust St., Philadelphia, Pa.
- ◆ Royersford Foundry & Machine Co. (Power transmission appliances), Royersford, Pa.; 53 N. 5th St., Philadelphia.
- Royle, John, & Sons (Machines), Paterson, N. J.

- Roy's Heat Control Co. (Heating systems), 915 Gates Ave., Brooklyn, N. Y.
- Ruboll Belting Co. (Cotton belting), 41 N. 10th St., Philadelphia, Pa.; Boston, Chicago.
- Ruby Chemical Co., The (Soldering flux), 68-70 McDowell St., Columbus, O.
- Rue Mfg. Co. (Injectors and ejectors), 228 Cherry St., Philadelphia, Pa.
- Ruemmel-Dawley Mfg. Co., The (Mach'y), 3900 Chouteau Ave., St. Louis, Mo.
- Rudolph, Alfred J., 1421 N. 20th St., Philadelphia, Pa.
- Rugg, E. T., & Co. (Rope), Newark, Ohio.
- Ruggles-Coles Engineering Co. (Cement dryers), 120 Broadway, New York.
- Ruggles-Klingemann Mfg. Co. (Steam specialties), 200 Devonshire St., Boston, Mass.
- Ruggles Machine Co. (Special machinery), Poultney, Vt.; 50 Nassau St., New York City.
- Rumsey, W., Co., The (Waste), Romeo, Mich.
- Rumsey Pump Co., Ltd. (Pumps, etc.), Seneca Falls, N. Y.; 75 Warren St., New York; 49 Federal St., Boston 9, Mass.
- Rumsey & Co., Ltd., 49 Federal St., Boston, Mass.
- Rumsey Pump & Machine Co., 75 Warren St., New York, N. Y.
- Rundie Mfg. Co. (Plumbers' enameled ware), 27th Ave. and Layton Park, Milwaukee, Wis.
- Rundie-Spence Mfg. Co. (Plumbing goods), 63-67 Second St., Milwaukee, Wis.
- Runyon Mfg. Co. (Grease pumps), 40-50 Market Ave., N. W., Grand Rapids, Mich.
- Rusler, H. B., Mfg. Co. (Spray pumps), Johnstown, O.
- Russ Manufacturing Co. (Welding apparatus), 5700 Walworth Ave., S. W., Cleveland.
- ◆ Russell, Burdall & Ward Bolt & Nut Co. (Bolts and nuts), Port Chester, N. Y.; 208 S. La Salle St., Chicago.
- Russell, W. A., & Co. (Steam and plumbing specialties), 63 West 37th St., New York, N. Y.; Factory at Waterbury, Conn.; 332 S. Michigan Ave., Chicago.
- Russell Jennings Mfg. Co. (Auger bits), Chester, Conn.
- Russell-Kinkaid Co. (Water softeners), 2729 Quinn St., Chicago, Ill.
- Russell, John M., Mfg. Co., Inc. (Plumbing specialties), Naugatuck, Conn.; 135 Summer St., Boston; Rialto Bldg., San Francisco; 521 Commerce St., Philadelphia; 117 Chamber St., New York; 121 E. 2nd St., Cincinnati; 175 W. Jackson Blvd., Chicago; 616 Baronne St., New Orleans; 107 St. James St., Montreal.
- (See index to advertisement, pages 7, 8 and 9.)
- ◆ Russell Mfg. Co., The (Cotton webbing, belting, etc.), Middletown, Conn.; 349 Broadway, New York; 1438 Michigan Ave., Chicago; 162 E. Jefferson Ave., Detroit; 60 S. Forsyth St., Atlanta.
- Russell Mfg. Co., The (Taps, dies, plates), Greenfield, Mass.
- Russell Sewage Disposal Co. (Disposal systems), Burlington, Ia.
- Russell & Co., The (Threshing machines), Massillon, O.
- Russia Cement Co. (Glue, oil, belt cement and dressings), Gloucester, Mass.
- Rust Products Co. of America (Rust remover), 64 E. Lake St., Chicago.
- Rustless Rule Co., Inc. (Rules), 9 Lafayette Ave., Buffalo, N. Y.
- Rutenber Electric Co. (Cooking apparatus), Marion, Ind.; 154 W. Lake St., Chicago; 145 W. 45th St., New York.
- Rutland Marble Mfg. Co. (Plumbers' marble), Rutland, Vt.
- Rutzler, E., Co. (Steam specialties), 404 E. 49th St., New York, N. Y.
- Ruud Mfg. Co. (Water heaters), 29th and Smallman Sts., Pittsburgh, Pa.; 1854 Euclid Ave., Cleveland; 131 Oneida St., Milwaukee; 218 S. Wabash Ave., Chicago; 829 Herman W. Hellman Bldg., Los Angeles; 1611 Wash. Ave., St. Louis; 1938 Market St., Philadelphia; 707 Elm St., Cincinnati; 45 S. Pennsylvania St., Indianapolis; 1406 Main St., Kansas City; 848 Commerce St., Dallas; 41 Court St., Buffalo; 81 Fulton St., New York; 337 E. Jefferson, Detroit.
- Ruv Company (Sterilizers), 165 Broadway, New York.
- Ryan, B., Company (Water heater thermostats), 366-72 West 15th St., New York.
- Ryan, E. J. (Heating specialties), 117 Walnut St., Danville, Ill.
- Ryan, F. J., & Company (Gas furnaces), Wesley Bldg., Philadelphia; 501 Fifth Ave., New York.
- Ryan, J. J., & Co. (Plumbing supplies), 104 S. Jefferson St., Chicago, Ill.
- Ryan & Long (Vehicle washers), 842 Cottage Ave., Appleton, Wis.
- Ryan & Fitzpatrick Co., Inc. (Wrenches and ferules), 424 River St., Troy, N. Y.
- Ryerson, Jos. T., & Son (Iron, steel, mach'y), 16th and Rockwell Sts., Chicago, Ill.; 501 Third St., South, Minneapolis; 1590 E. Euclid, Detroit.
- "S-C" Regulator Mfg. Co., The (Steam specialties), Postoria, O.; Boston; New York; Washington; Scranton; Pittsburgh; Cleveland; Charlotte, N. C.; Atlanta; New Orleans; Kansas City; Chicago; Indianapolis; Detroit.
- S. E. T. Valve & Hydrant Co. (Valves), 50 Church St., New York; 433 Com'l Trust Bldg., Philadelphia; Times Bldg., Troy, N. Y.
- ◆ S. K. F. Industries, Inc. (Steel balls), 165 Broadway, New York; Atlanta; Boston; Buffalo; Chicago; Cleveland; Detroit; Philadelphia; San Francisco.
- S. F. F. Steel Barrel Co. (Steel barrels), 7930 Jones Road, Cleveland, O.
- S. & I. Co., The (Hand tools), 55-57 Governor St., Springfield, Mass.; 94 Chambers St., New York, N. Y.; 62 E. Lake St., Chicago, Ill.; Park and Hubbard Sts., Oakland, Cal.
- Sabin, Frederick, & Co., Inc. (Fuel economizers), 237 Broad St., Philadelphia, Pa.
- Sackett, H. B., Screen & Chute Co. (Industrial railways, etc.), 1885 Elston Ave., Chicago, Ill.; 195 Medford St., Charlestown, Mass.
- Sacramento Pipe Works (Pipe and fittings), 716-722 R St., Sacramento, Cal.
- Saeger Engine Works (Gas engines), Lansing, Mich.
- Safety Emery Wheel Co. (Grinding mach'y), Springfield, O.
- Safety Fire Extinguisher Co. (Fire extinguishers), 291 Seventh Ave., New York, N. Y.
- ◆ Safety First Mfg. Co. (Shaft couplings), Alexandria, Va.
- Safety First Shoe Co. (Foundrymen's shoes), 75 Westminster St., Providence, R. I.
- Safety Gas Main Stopper Co. (Gas main stoppers), 943 Fulton St., Brooklyn, N. Y.
- Safety Nut & Bolt Co., Union Bldg., Cleveland, Ohio.
- Safety Service & Engineering Co. (Ladder shoes), 5716 Euclid Ave., Cleveland, O.
- Safety Truck Brake Co. (Hand truck brakes), Appleton, Wis.
- Safety Water Heater Co. (Water heaters), 15 E. Van Buren St., Chicago, Ill.
- Safety Wrench & Appliance Co. (Car wrenches), 13th and Market St., Philadelphia, Pa.
- Sager Drill Socket Co. (Drill sockets), West Albany, N. Y.
- ◆ Saginaw Mfg. Co. (Wood pulleys), Saginaw, Mich.
- Saginaw Mirror Co. (Glass shelves and mirrors), Saginaw, Mich.
- Sahlin Mfg. Co. (Furnace regulator), 31 Ottawa Ave., N. W., Grand Rapids, Mich.
- Sands Mfg. Co., Sweeney Ave. and Erie Railroad, Cleveland, O.
- Sanymetal Products Co., The (Steel closet stalls), 978 E. 64th St., Cleveland, O.
- St. John, G. C. (Steam meters), 280 Madison Ave., New York, N. Y.
- St. Louis Brass Mfg. Co. (Lighting fixtures), Jefferson and Washington Aves., St. Louis, Mo.
- St. Louis Candle & Wax Co. (Plumbers' candles), St. Louis, Mo.
- St. Louis Cordage Mills (Rope, etc.), 11th and Souard Sts., St. Louis, Mo.
- St. Louis Machine Tool Co. (Machine tools), 932 Loughborough Ave., St. Louis, Mo.
- St. Louis Malleable Casting Co. (Washers, etc.), 7701 N. Conduit, St. Louis, Mo.
- St. Louis Sales Co. (Clamps and vises), 1116 Chemical Bldg., St. Louis, Mo.
- St. Louis Screw Co. (Screws, bolts, taps, etc.), Clarence and Bulwer Aves., St. Louis, Mo.
- Salamander Grate Bar Co. (Grates), 126 Liberty St., New York, N. Y.
- Salem Brass & Iron Mfg. Co. (Plumbing iron goods), Bridgeton, N. J.
- Salem Foundry & Machine Works (Transmission and flour mill mach'y), Salem, Va.
- Salem Iron Works (Sawmill mach'y), Winston-Salem, N. C.
- Sales, Murray W., & Co. (Pipe coils and bends), 315 W. Jefferson Ave., Detroit, Mich.
- Salisbury Ball Bearing Corp. (Ball bearings, etc.), 1276 E. 2d St., Jamestown, N. Y.
- Salisbury, W. E., & Co., Inc. (Leather belting and rubber goods), 308-310 W. Madison St., Chicago; factory, Carroll Ave. and May St., Tulsa, Okla.
- (See index to advertisement, pages 7, 8 and 9.)
- Sall Mountain Co. (Asbestos goods), 140 S. Dearborn St., Chicago, Ill.; 260 State St., Boston; 140 W. 20th St., New York; Scranton, Pa.
- Sampson Mfg. Co. (Closet flushing valves), 4244 W. Lake St., Chicago, Ill.
- San Antonio Machine & Supply Co. (Engines and mach'y), San Antonio, Texas; Corpus Christi, Texas.
- San Antonio Sewer Pipe Works (Sewer pipe), San Antonio, Texas.
- Sanborn Furnace Co. (Heating furnaces and boilers), Methuen, Mass.
- Sand, J., & Sons (Levels), 1023-29 Rivard St., Detroit, Mich.

- Sanderson-Cyclone Drill Co. (Drills), Orrville, O., 30 Church St., New York.
- Sandham, R. R. (Shower baths), Harlan, Ia.
- Sandoval Zinc Co. (Metals), 410 N. Peoria St., Chicago, Ill.; Chemical Dept., East St. Louis, Ill.; Works: Sandoval, Ill.
- Sands, A. B. & Son Co. (Marine plumbing fixtures), 20 Vesey St., New York, N. Y.; Washington, D. C.; Philadelphia, Pa.
- Sands Mfg. Co., The (Water heaters), 5305 Sweeney Ave., Cleveland, O.
- Sandusky Foundry & Machine Co., The (Steam and power pumps), Market and Fulton Sts., Sandusky, O.
- Sandusky Packless Valve Co. (Valves), 1209 W. Adams St., Sandusky, O.
- Sandusky Tool Co. (Carpenters' tools), Sandusky, O.
- Sandy Hill Iron & Brass Works, The (Paper mill mach'y), Hudson Falls, N. Y.
- San Francisco Engineering Co. (Pipe cutting and threading machines, etc.), 322-324 Sixth St., San Francisco, Cal.
- Sanford, F. C., Mfg. Co. (Welding apparatus), 2069 Fairfield Ave., Bridgeport, Conn.
- Sanford, Riley, Stoker Co. (Mechanical stokers), Worcester, Mass.; Boston, Buffalo, Chicago, Cincinnati, Cleveland, Denver, Detroit, Kansas City, New York, Philadelphia, Pittsburgh, St. Paul.
- Sanibross Corp., The (Shower baths), 200 Fulton St., Brooklyn, N. Y.
- Sanitary Appliance Co. (Water closet ventilators), Neenah, Wis.
- Sanitary Bath Curtain Mfg. Co. (Shower bath curtains), 85 Warren St., New York, N. Y. (See index to advertisement, pages 7, 8 and 9.)
- Sanitary Cement Co. (Cement sinks), Everett, Mass.
- Sanitary Chemical Closet Co. (Chemical closets), Hillsdale, Mich.
- Sanitary Company of America, Linfield, Penn., Factories and stores, Linfield, Pa. and East Greenville, Pa.; Philadelphia office, 940 Drexel Bldg.; New York office, 50 Church St.; Boston office, 432 Rice Bldg.; Pittsburgh office, 902 Arrott Bldg. (See index to advertisement, pages 7, 8 and 9.)
- Sanitary Earthenware Specialty Co., The (Sanitary earthenware), Trenton, N. J.
- Sanitary Heating Co., The (Gas heaters), 233 37th St., Brooklyn, N. Y.
- Sanitary Mechanical Specialty Co. (Sewage ejectors), 157 E. 72d St., New York, N. Y.
- Sanitary Specialties Co. (Plumbing goods), Cor. Collins and Hazzard Sts., Philadelphia, Pa.
- Sanitary Specialty Co., The (Floor hanges), 232 Mulberry St., Newark, N. Y.
- Sanitary & Specialty Co., The (Closet tanks), 50 Water St., South Norwalk, Conn.
- Sanitary-Washed Wiper Co., The (Machine wipers), 813-15 So. Delaware St., Indianapolis, Ind.
- Santas Mfg. Co., The (Plumbing goods), 105 Washington St., Boston, Mass.; 38-40 W. 32d St., New York.
- Saranac Machine Co. (Woodworking mach'y), Benton Harbor, Mich.
- Sarco Co., Inc. (Steam specialties), Woolworth Bldg., New York, N. Y.; Monadnock Bldg., Chicago; Majestic Bldg., Detroit; Drexel Bldg., Philadelphia; 325 Ellicott Sq., Buffalo, N. Y.; Williamson Bldg., Cleveland, Ohio.
- Sargent & Co. (Bathroom fittings), New Haven, Conn.; Chicago; Philadelphia; Boston; New York.
- Sasgen Derrick Co. (Derricks), 3101-3119 Grand Ave., Chicago, Ill.
- Saturn Rubber Co. (Plumbers' sundries), 101 Beekman St., New York, N. Y.
- Sauer Power Generating Co. (Shaft bearings), 5115-19 Rosetta St., Pittsburgh, Pa.
- Sauerman Bros. (Excavating mach.), 53 W. Jackson Blvd., Chicago, Ill.
- Saunders, D., Sons, Inc. (Pipe threading mach'y), 25 Atherton, Yonkers, N. Y.
- Sauquoit Toilet Paper Co., Inc. (Toilet paper), Seward Ave., New Hartford, N. Y.
- Saurer Motor Co. (Motor trucks), 252 W. 64th St., New York, N. Y.
- Savage Expansion Bolt Corp. (Expansion shields), 9 Desbrosses St., New York.
- Savage, W. J., Co. (Metal cutting shears), Knoxville, Tenn.
- Savill's, Thos., Sons (Plumbing specialties), 1310 Wallace St., Philadelphia, Pa.
- Savo Manufacturing Co. (Air moisteners), 111 W. Monroe St., Chicago, Ill.
- Sawyer Belt Hook Co. (Belt hooks), 16 Warren Ave., Pawtucket, R. I.
- Sawyer Gear Works (Gears and pinions), 5122 St. Clair St., Cleveland, O.
- Sayre, L. A., Company (Small tools), 230-40 Mulberry St., Newark, N. J.
- Scalfie, Wm. B., & Sons Co. (Tanks, boilers, etc.), First National Bank Bldg., Pittsburgh, Pa.; 26 Cortlandt St., New York; 38 S. Dearborn St., Chicago, Ill. (See index to advertisement, pages 7, 8 and 9.)
- Scallan, W. E., & Co. (Drill holders), 1122-26 Gest St., Cincinnati, O.
- Scandinavia Belting Co. (Cotton belting), 106-108 Reade St., New York, N. Y.; 143 High St., Boston; 1434 W. 3d St., Cleveland; Boston Bldg., Denver; 11-15 Fremont St., San Francisco, Cal.; 611 W. Adams St., Chicago.
- Scannell Boiler Works (Tanks and boilers), 26-44 Tanner St., Lowell, Mass.
- Schacht Rubber Mfg. Co. (Plumbing rubber goods), Huntington, Ind.
- Schade Valve Mfg. Co. (Valves, etc.), 2527 N. Bodine St., Philadelphia, Pa.; New York.
- Schaefer & Beyer (Blow torches), 52 Bragaw Ave., Newark, N. J.
- Schaeffer Bros. & Powell Mfg. Co. (Plumbers' candles), St. Louis, Mo.; Chicago, Ill.
- Schaefer Mfg. Co. (Concrete mixers), Berlin, Wis.
- Schaefer Mfg. Co., The (Cast iron pulleys), Birmingham, Ala.
- Schaeffer & Budenberg Mfg. Co., The (Steam gauges, etc.), Berry and South 5th Sts., Brooklyn, N. Y.; Chicago, Detroit, Los Angeles, Philadelphia, Pittsburgh, San Francisco, Montreal, Toronto. (See index to advertisement, pages 7, 8 and 9.)
- Schaffer, Chas. W., Co., The (Bathroom fittings), 3214 Chestnut St., Philadelphia, Pa.
- Schaffer Engineering & Equipment Co. (Weighing machines), People's Bank Bldg., Pittsburgh, Pa.
- Schatz Mfg. Co., The (Punching and shearing mach'y), 23 Fairview Ave., Poughkeepsie, N. Y.
- Scheinman, I. L., & Co. (Machine wipers), 974 Sherman, Detroit, Mich.
- Schellenbach-Hunt Tool Co., The (Reamers, etc.), 116-124 Opera Place, Cincinnati, O.
- Schellert Mfg. Co. (Gaskets), 1122 E. 10th St., Indianapolis, Ind.
- Schemmel Welding & Machine Works (Welding apparatus), Wapakoneta, O.
- Schenck Mfg. & Supply Co. (Gas engines, pumps, etc.), Parkers Landing, Pa.
- Schieren, Chas. A., Co. (Leather belting), 42 Ferry St., New York, N. Y.; 116 W. Illinois St., Chicago; 641-643 Atlantic Ave., Boston; 226 N. Third St., Philadelphia; 122 Shore St., Petersburg, Va.; 337 Second Ave., Pittsburgh; 1752 Arapahoe St., Denver; 305 First Ave., South, Seattle; The Texas, Chas. A. Schieren Co., Inc., 205 S. Market St., Dallas, Tex.; 404-406 Canal St., New Orleans; Oak Leather Tanneries, Bristol, Tenn.
- Schild Specialty Co. (Traps), 111-115 High St., Cleveland, O.
- Schiller, Joseph F. (Blow-off valves), 316 S. Lawrence St., Philadelphia, Pa.
- Schlungen Bros. Co. (Hose fittings), 2435 Irving Park Blvd., Chicago, Ill.; 717 Market St., San Francisco, Cal.
- Schleit, W. A., Mfg. Co., Inc. (Garage heaters), Syracuse, N. Y.
- Schlichter Jute Cordage Co., The (Cordage), 20 N. Front St., Philadelphia, Pa.
- Schlueter, M. L. (Floor scrubbing machines), 225-27 W. Illinois St., Chicago, Ill.
- Schmidt, B. L., Co. (Internal grinders), Davenport, Iowa.
- Schmidt, F. L., & Co., Inc. (Belt tighteners), 11th Ave. & 21st St., New York.
- Schneider & Goosman Machine Co., The (Planers), 1929 Race St., Cincinnati, O.
- Schoder & Lombard Stamp & Die Co., Inc. (Steel stamps), 202 Centre St., New York, N. Y.
- Schofield's, J. S., Sons Co. (Engines, boilers, etc.), Macon, Ga.; Charlotte, N. C.
- Scholler Mfg. Co., Inc. (Adjustable wrenches), 147 Leslie St., Buffalo, N. Y.; 150-152 Chambers St., New York, N. Y.
- Schollhorn, Wm., Co., The (Pliers, nipples, punches), New Haven, Conn.
- Schonberg, I., Inc. (Solder), 122 Flushing Ave., Brooklyn, N. Y.; Cleveland, Baltimore, New Orleans, Norfolk, Va.
- Schrader's, A., Sons, Inc. (Hose fittings), 470 Vanderbilt Ave., Brooklyn, N. Y.; 1516 S. Wabash Ave., Chicago; 334 King St., E., Toronto.
- Schramm, Christian D., & Son, Inc. (Rock drills), 709 Arch St., Philadelphia, Pa.; 140 West St., New York, N. Y.
- Schueler Ventilator Co. (Radiator shields), Eureka, Ill.
- Schultz, A. L., & Son (Ice harvesting mach'y), 1675-77 Elston Ave., Chicago, Ill.
- Schulte Brass Mfg. Co. (Plumbers' brass goods), Norwood, Cincinnati, O.
- Schum Bros. (Nut locks), Metropolitan Tower, New York.
- Schutte & Koerting Co. (Power plant specialties), 12th and Thompson Sts., Philadelphia, Pa.; 10 High St., Boston; 50 Church St., New York; 805 Security Bldg., Chicago.
- Schuykill Forge Co. (Drop forgings), Luzerne and Third Sts., Philadelphia, Pa.
- Schwab, R. J., & Sons Co. (Heating furnaces, etc.), 283 Clinton St., Milwaukee, Wis.
- Schwander Brass Mfg. Co. (Bibbs and cocks), 823 N. 8th St., St. Louis, Mo.
- Schwartz Belting Co. (Leather belting), 76 Murray St., New York, N. Y.

- Schweitzer, Chas. K. Co. (Molds for Babbitt, lead, spelter, etc.), 520 N. 3d St., St. Louis, Mo.
- Schwerdtle Stamp Co., The (Steel stamps), Bridgeport, Conn.
- Scientific Heater Co., The (Gas heating boilers), 2100 Superior Viaduct, Cleveland, O.
- Scientific Instrument Co. (Oil burners), 711 Eighth, Detroit, Mich.
- Scientific Materials Co. (Scientific instruments), 717 Forbes St., Pittsburgh, Pa.
- Scientific Utilities Co. (Calorimeters), 1161 Broadway, New York, N. Y.
- Scott Drill Co. (Rock drills), 6405 Plymouth St., St. Louis, Mo.
- Scott, C. P., & Sons (Thermometers), 219-221 Franklin St., Buffalo, N. Y.
- Scott, C. U., & Son (Furnaces), 1510 1st Ave. St., Rock Island, Ill.
- Scott, C. W. (Brazing furnaces, etc.), at the head of Wall St., Davenport, Ia.
- Scott, J. E., Cup Co. (Oil cups), 140 W. Notten St., Columbus, O.
- Scott Paper Co. (Toilet paper holders), Front and Market Sts., Chester, Pa.
- Scott Spencer Automatic Tool Co. (Screw machine tools), Cincinnati, O.
- Scott & Sons Co. (Automatic chucks), Medford, Mass.
- Scott Valve Mfg. Co. (Valves), 310 W. Randolph St., Chicago, Ill.; McKinley Ave. and G. T. R. R., Detroit, Mich.
- Scottdale Machine & Mfg. Co. (Coal handling equipment), Scottdale, Pa.
- Scovill Mfg. Co. (Brass and copper), Waterbury, Conn.
- Scoville, E. U., Co. (Oil cocks), Manlius, N. Y.
- Scranton Bolt & Nut Co. (Bolts, etc.), Poplar & Ward Sts., Scranton, Pa.; 120 Broadway, New York City.
- Scranton & Co., The (Power hammers, etc.), New Haven, Conn.; Bradford, Pa.
- Scranton Electric Construction Co. (Mining drills), 625-629 Connell Bldg., Scranton, O.
- Scranton Pump Co. (Steam pumps, blowers, etc.), Scranton, Pa.
- Scranton Whetstone & Abrasive Co., The (Oilstones and grinding wheels), Scranton, Pa.; 544 Van Ness Ave., San Francisco; 113 Chambers St., New York, N. Y.
- Scripps Motor Co., The (Marine motors), 5817 Lincoln Ave., Detroit, Mich.
- Scully-Jones & Co. (Milling spacers and tap chucks), 647 Railway Exchange, Chicago, Ill.
- Scully Steel & Iron Co. (Bollermakers' and engineers' specl'ts), 2364 S. Ashland Ave., Chicago; U.S. Express Bldg., New York; 212 Stephenson Bldg., Milwaukee; 433 Andrus Bldg., Minneapolis; 408 Boston Bldg., Denver; 216 Stimson Bldg., Los Angeles.
- Seaboldt, B., Corp. (Thread inspection apparatus), 25 West Broadway, New York.
- Seagrave Co., The (Fire department supplies), Columbus, O.
- Searing & Coultas (Blast furnaces), Farmers Bank Bldg., Pittsburgh, Pa.
- Searls Mfg. Co. (Bathroom furnishings), 27 Mulberry St., Newark, N. J.
- Seattle Brass Co. (Plumbers' brass goods), 7th Ave., S., and Andover St., Seattle, Wash.
- Seattle Machine Works (Lumber stackers), Lander St. & East Waterway, Seattle, Wash.
- Seaverns, James B. (Portable conveyor), Peoples Gas Bldg., Chicago, Ill.
- Sebastian Lathe Co. (Lathes), Box 729, Cincinnati, O.
- Sebelin, Eugene W. (Gas engines), Davenport, Ia.
- Security Tool Works (Chucking grinders), 1407 W. Jackson Blvd., Chicago, Ill.
- Seehausen, Wehrs & Co. (Flue cleaners), 179 N. Franklin St., Chicago, Ill.
- Seestedt, Henry W. (Bath tubs), Romulus, Mich.
- Seevers Mfg. Co. (Bollers), Oskaloosa, Ia.
- Seibert, Louis L., & Co. (Saw mill machinery), Cincinnati, O.
- Seidel, R. B., Inc. (Crucibles), 1322 Callowhill St., Philadelphia, Pa.
- Selas Co. (Gas lighting equipment), 108 S. 4th St., Philadelphia, Pa.
- Self-Cleaning Strainer Co., Harry E. Paget, Prop. (Pump strainers), 6329 Stewart St., Chicago, Ill.
- Self Clinching Nail Co. (Nails), 44 N. 4th St., Philadelphia, Pa.
- Self Propelling Nozzle Co. (Sewer cleaning nozzles), 99 Water St., New York.
- Sellers, Wm., & Co., Inc. (Metal working mach'y), 1600 Hamilton St., Station J, Philadelphia, Pa.; 79 Milk, Boston, Mass.
- Sellew Machine Tool Co. (Vises), Pawtucket, R. I.
- Semet-Solvay Co. (Ironwork paint), 522 Fifth Ave., New York, N. Y.; 332 S. Mich. Ave., Chicago; 77 Summer St., Boston.
- Seneca Falls Mfg. Co., Inc., The (Woodworking mach'y), 314-40 Falls St., Seneca Falls, N. Y.
- Seneca Iron & Steel Co. (Iron and steel sheets), Buffalo, N. Y.
- Seneca Wire & Mfg. Co. (Wire), Fostoria, Ohio.
- Senn, E. R., & Co. (Belt dressing), 99 13th St., Brooklyn; Chicago.
- Sero Specialty Co. (Belt dressings), 2860 E. 84th St., Cleveland, O.
- Servus Rescue Equipment Co., The (Smoke helmets), 50 Columbia St., Newark, N. J.
- S. E. T. Valve & Hydrant Co., The (Curb boxes), 50 Church St., New York, N. Y.; 433 Com'l Trust Bldg., Philadelphia.
- Severance Gas Machine Co., The (Gas machines), Freeport, Ill.
- Sexauer, J. A., Mfg. Co. (Plumbing and heating specialties), 523 Eighth Ave., New York.
- Sexton Can Co. (Sheet metal specialties), Everett Station, Boston, Mass.
- Sexton, S. B., Stove & Mfg. Co., The (Stoves and furnaces), 7-9 S. Gay St., Baltimore, Md.
- Seymour, James M., (Fans), 51-53 Lawrence St., Newark, N. J.
- Seymour Mfg. Co., The (Bronze and German silver), Seymour, Conn.
- Shackley, W. T., & Son Co. (Leather belting), 49 High St., Boston, Mass.
- Shadall Mfg. Co. (Closet ventilators), Wauwatosa, Wis.
- Shafer Mfg. Co. (Chemical closets), Leipsic, Ohio.
- Shafer-Decker Co. (Commutator grinders), 15 Circle St., Rochester, N. Y.
- Shaffer, Charles H. (Flushing valve), 14 S. First St., Muskegon, Mich.
- Shaler, C. A., Co. (Vulcanizers), Waupun, Wis.; 17 Moore St., New York.
- Shanafelt Mfg. Co., The (Patterns and plates), Canton, O.
- Shanklin Mfg. Co. (Miners' lamps); Springfield, Ill.
- Shannon, J. Jacob & Co. (Hoisting apparatus), 1744 Market St., Philadelphia, Pa.
- Shannon Mfg. Co. (Garbage burners), 224 W. 26th St., New York, N. Y.
- Shannon, Wm. (Rasps), Middletown, N. Y.
- Sharkey & Peck (Tanks and boilers), 2433 W. 18th St., Chicago, Ill.
- Sharp Rotary Ash Receiver Co., Inc. (Ash cans), Springfield, Mass.
- Sharp, Sam J., 101 8th St., Warwood, Wheeling, N. J.
- Sharpless & Watt Co. (Medicine cabinets), 1520 Sansom St., Philadelphia, Pa.
- Shaw, Benjamin F., Co. (Pipe and fittings), Wilmington, Del.
- Shaw Blueprint Machine Co. (Blueprint wringer), 9-11 Campbell St., Newark, N. J.
- Shaw Coupling Co. (Shaft couplings), 801-3 W. Fayette St., Syracuse, N. Y.
- Shaw, C. H., Pneumatic Tool Co., The (Pneumatic tools), 35th and Wazee Sts., Denver, Colo.
- Shaw Kendall Engineering Co., The (Pipe fittings), S. Superior St., Toledo, O.
- Shaw Propeller Co. (Alligator wrenches), 15 Elkins St., S. Boston, Mass.; 8 Winter St., Boston, Mass.
- Shaw, Welsh & Co. (Baling presses), Galesburg, Ill.
- Shawmut Chemical Co. (Boiler preservative), 42 Battery-march St., Boston, Mass.
- Shawmut Iron & Wire Works (Lockers, bins, etc.), 97 Tilston St., Everett, Mass.
- Shawver Co., The (Woodworking mach'y), Springfield, O.
- Shays, J. R., Jr. (Flexible shaft coupling), 143 Greenwich St., New York.
- Sheak Filter Co., The (Water filters), Binghamton, N. Y.
- Shear Klean Grate Co. (Furnace grates), 310 Monadnock Bldg., Chicago, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Sheer Bros. Fence & Iron Co. (Iron fencing), E. 103rd St., Cleveland, O.
- Sheet Metal Products Co., Duluth, Minn.
- Shehan Tool Co. (Threading dies), 321 Frankfort Ave., Cleveland, Ohio.
- Shelby Spring Hinge Co., The (Toilet paper holders), Shelby, O.
- Sheldon, E. H., & Co. (clamps), Muskegon, Mich.
- Sheldon Engine & Sales Co. (Cement mixer), Waterloo, Iowa.
- Shepard Electric Crane & Hoist Co. (Hoisting apparatus), Montour Falls, N. Y.; New York; Philadelphia; Pittsburgh; Chicago.
- Shepard Lathe Co. (Lathes), Rising Sun, Ind.
- Shepherd Engineering Co., The (Steam engines), Williamsport, Pa.
- Sheppard, Isaac A., & Co. (Heating apparatus), Erie Ave. and Sepviva St., Philadelphia, Pa.; New York; Baltimore.
- Sheppard, J. E., Co. (Counting machines), Worcester, Mass.
- ◆ **Sherman, H. B., Mfg. Co.** (Hose and plumbing brass goods), Battle Creek, Mich.
- (See index to advertisement, pages 7, 8 and 9.)
- Sherwood Brass Works** (Water closet combinations), 6331 Jefferson Ave., E., Detroit, Mich.
- (See index of advertisement, pages 7, 8 and 9.)
- ◆ **Sherwood Mfg. Co.** (Engine room specialties), 1703-1712 Elmwood Ave., Buffalo, N. Y.; 220 Broadway, New York, N. Y.; 136 Chestnut St., Philadelphia; 1514 Kimball Bldg., Chicago, Ill.; 709 Mission St., San Francisco, Cal.
- (See Index to advertisements, pages 7, 8 and 9.)



- Shields Cutter Co. (Cutters, etc.), 18511 Euclid Ave., Cleveland, O.; 546 W. Wash. Blvd., Chicago; 192 Chambers St., New York.
- Shimer, Samuel J., & Sons (Woodworking specialties), Milton, Pa.
- ◆ **Shingle Leather Co.** (Leather for belting and specialty mfrs.), 313-315 Vine St., Philadelphia, Pa.; Madison Terminal Bldg., Chicago, Ill. (See Index to advertisements, pages 7, 8 and 9.)
- Shipp, C. C., & Co. (Heating and ventilating apparatus), 230 East Ohio, Indianapolis, Ind.
- Shirk Refrigerator Co. (Refrigerator traps), 116 S. Michigan Ave., Chicago, Ill.
- Shonberg, I., Inc. (Solder), 122 Flushing Ave., Brooklyn, N. Y.; Cleveland, O.; New Orleans; Baltimore; Norfolk, Va.
- Shope Flush Valve Co. (Flush valves), 10 Railroad Pl., Newark, N. J.
- Shore Instrument & Mfg. Co. (Scleroscopes), Van Wyck Ave. & Carroll St., Jamaica, N. Y.
- Shriver, T., & Co. (Presses, etc.), Harrison, N. J.
- Shultz Belting Co. (Leather belting), Bismark and Barton Sts., St. Louis, Mo.; 111 Chambers St., New York; 114 High St., Boston; 116 N. 3d St., Philadelphia.
- Shunk, H. A., Inc. (Reamers), 437 W. 42d St., New York, N. Y.
- Shur-Tite Mfg. Co. (Steamfitters' cement), Cleveland, Ohio.
- Shuster, F. B., Co. The (Metal working mach'y), New Haven, Conn.
- Shwab Bros. Co. (Plumbers' woodwork), 811 E. Ninth St., New York, N. Y.
- Sibley Machine Company (Drilling machines), 146 E. Tutt St., South Bend, Ind.
- ◆ **Sidney Machine Tool Co.** The (Woodworking mach'y and lathes), Sidney, O.
- Sidney Steel Scraper Works (Contractors' equipment), Sidney, O.
- Siegrist, E. F. (Flushing valves), 263 Laurel St., Buffalo, N. Y.
- Sieverkropp Engine Co., The (Gas engines), Racine, Wis.
- Sigourney Tool Co., The (Drills), Hartford, Conn.
- Sikes, S. R., & Co. (Leather belting), Corner 11th Ave., So., and 3rd St., Minneapolis, Minn.; 824 Union St., New Orleans, La.; 30 S. Jefferson St., Chicago.
- Sill Stove Works (Gas ranges), Rochester, N. Y.
- Sillcocks-Miller Co., The (Tanks and seats), South Orange, N. J.
- Silver & Co. (Bathroom furnishings), 304-314 Hewes St., Brooklyn, N. Y.
- Silver Lake Co. (Small rope), Newtonville, Mass.
- Silver Mfg. Co. (Drills, etc.), 817 Broadway, Salem, O.
- Simmons Hardware Co. (Hand tools), St. Louis, Mo.; New York, Philadelphia, Toledo, Minneapolis, Sioux City, Wichita.
- Simmons, John, Co. (Pipe fittings), 104-10 Center St., New York; Newark, N. J.; Long Island City, N. Y.
- Simmons Machine Co., Inc. (Grinding machines), 981 Broadway, Albany, N. Y.; Singer Bldg., New York City; 358 Ellicott Sq., Buffalo, N. Y.
- Simmons Pipe Bending Works (Pipe bends and coils), 40 Mechanic St., Newark, N. J.
- Simmons, W. H., & Co. (Upright drills), 208 Lawrence St., Cincinnati, O.
- Simon, Buhler & Baumann, Inc. (Brewery mach'y), 29 Broadway, New York, N. Y.; Chicago, Cleveland, Denver.
- Simonds File Co. (Files), Fitchburg, Mass.
- Simons, H. C., Sons (Boilers), North Bennington, Vt.
- ◆ **Simonds Mfg. Co.** (Saws), Fitchburg, Mass.; Chicago; New York; Portland; Lockport, N. Y.; New Orleans; San Francisco; Seattle; Memphis; Montreal.
- Simons Mfg. Co.** (Rust solvent), 2116 Indiana Ave., Chicago, Ill. (See index to advertisement, pages 7, 8 and 9.)
- Simplex Ejector Co. (Sewage ejectors), 1050 Randolph St., Chicago, Ill.; 912 Madison Ave., Paterson, N. J.
- Simplex Electric Heating Co., The (Electric heating appliances), Cambridge, Mass.; 15 S. Desplaines St., Chicago.
- Simplex Heating Specialty Co. (Steam heating specialties), Lynchburg, Va.
- Simplex Joint Mfg. Co. (Soil pipe joints), 167 Prince St., Newark, N. J.
- Simplex Machine Tool Co., The (Lathes), Cleveland, O.
- Simplex Manufacturing Co. (Leather washers), 10-12 Garden St., Auburn, N. Y.
- Simplex Mfg. Co. (Electric tools), Newtonville, Mass.
- Simplex Mfg. Co.** (Roof flanges), 313 S. Clinton St., Chicago, Ill.; New York, N. Y. (See Index to advertisements, pages 7, 8 and 9.)
- Simplex Sales Co., 313 S. Clinton St., Chicago, Ill.
- Simplex Time Recorder Co. (Time recorders), Gardner, Mass.; Boston; New York; Philadelphia; Cleveland; Pittsburgh; Chicago; San Francisco; Milwaukee; Buffalo; Atlanta; Birmingham; Detroit; Louisville; Denver; Dallas; Fort Worth; New Orleans.
- Simplex Tool Co. (Bench plates), Woonsocket, R. I.
- Simplex Tool & Supply Co.** (Gas and oil furnaces), 127 Oliver St., Boston, Mass.
- Simplex Valve & Motor Co. (Valves and meters), 112 N. Broad St., Philadelphia, Pa.
- Simpson-Orville Co., The (Mach'y), Knowlton and Linden Sts., Cincinnati, O.
- Sims Co., The (Feed water heaters, etc.), Erie, Pa. Agencies in all cities.
- Sinclair & Morrison Co., The (Well drilling mach'y), Lima, O.
- Sinclair-Scott Co., The (Friction clutches), Wells and Patapasco Sts., Baltimore, Md.
- Singer, F. O., Co. (Heating boilers), 1213 N. Fremont St., Baltimore, Md.
- Single Faucet and Flush Valve Co. (Shower bath and flushing valves), 617 W. Jackson Blvd., Chicago, Ill.
- ◆ **Sinker-Davis Co.** The (Engines, sawmill mach'y, etc.), 230 S. Missouri St., Indianapolis, Ind. (See index to advertisement, pages 7, 8 and 9.)
- Sipp Machine Co., The (Drilling machines), Paterson, N. J.
- Sistersville Boiler Works (Boilers and tanks), Sistersville, W. Va.
- Sixth City Sheet Metal Works Co. (Damper regulators), Cleveland, O.
- Sizer Forge Co. (Iron and steel forgings), Buffalo.
- Skat Co., The (Hand soap), 791 Park St., Hartford, Conn.
- S. K. F. Industries, Inc. (Ball bearings, hangers, etc.), 165 Broadway, New York, N. Y.
- Skinner Bros. Mfg. Co. (Heating, ventilating, drying and blow pipe apparatus), 1400-90 S. Vandevanter Ave., St. Louis, Mo.; Indianapolis; New York.
- ◆ **Skinner Chuck Co.** (Chucks), New Britain, Conn.; 94 Reade St., New York, N. Y.; Rialto Bldg., San Francisco, Cal.; 552 W. Wash. Blvd., Chicago.
- ◆ **Skinner & Co., M. B.** (Steam specialties), 558-563 Washington St., Chicago, Ill.
- Skinner & Connolly (Gauge glass cutters), Yonkers, N. Y.
- Skinner Engine Co. (Steam engines), Erie, Pa.
- Skinner Irrigation Co., The (Irrigation systems), Troy, O.
- Slate Products Co. of America (Slate), Bangor, Pa.
- Sleeper & Hartley. (Pipe straighteners), Worcester, Mass.
- Sloan & Chace Mfg. Co., Ltd. (Metal working mach'y), 6th Ave. and N. 13th St., Newark, N. J.
- Sloan Valve Co. (Plumbing specialties), 4300 W. Lake St., Chicago, Ill.; Albany, Buffalo, Los Angeles, San Francisco, Cleveland, Durham, Conn.; Detroit, Indianapolis, Bayonne, N. J.; New York, Seattle, Philadelphia, St. Louis, Minneapolis, Milwaukee, Washington, D. C.
- Slocumb, F. F., & Co., Inc. (Pneumatic punches), 14th and Poplar Sts., Wilmington, Del.
- Slocumb, J. T., Co. (Gauges, micrometers, etc.), Providence, R. I.
- Sly, W. W., Mfg. Co., The (Sand blast machines), 4700 Train Ave., Cleveland, O.; Birmingham; Chicago; Detroit; Los Angeles; New York; St. Louis; Chattanooga.
- Smalley-General Co. (Thread millers), Bay City, Mich.
- Smith, F. L., & Co. (Lenix drives), 50 Church St., New York, N. Y.
- Smillie, C. M., & Co. (Damper regulators), 520 E. Larned St., Detroit, Mich.
- Smith, A. P., Mfg. Co., The (Tapping machines), N. E. cor. Norman & Lawrence Sts., East Orange, N. J.; Chicago, Boston, Tacoma.
- Smith Co., E. M. (Cotton belting, etc.), 618-620 S. Clarence St., Los Angeles, Cal.
- Smith-Courtney Co. (Bearing metal), So. 7th and Bainbridge Sts., Richmond, Va.
- Smith & Egge Mfg. Co., The (Sash and plumbers' chains, etc.), Bridgeport, Conn.; 258 Broadway, New York; Chemical Bldg., St. Louis; Monadnock Bldg., San Francisco.
- Smith, E. C., Mfg. Co. (Bathroom specialties), 900 W. Jackson Blvd., Chicago, Ill.
- Smith, E. M., Co. (Canvas belting), Los Angeles, Calif.
- Smith Engineering Works (Rock and gravel handling machines), 32d and Locust Sts., Milwaukee, Wis.
- Smith Facing & Supply Co. (Foundry supplies), 1857 Carter St., Cleveland, O.; 1020 Marine Bank Bldg., Buffalo, N. Y.
- Smith, F. P., & Co. (Belt hooks), Sharon Hill, Pa.
- Smith, F. P., Wire & Iron Works (Wire and iron goods), Clybourn and Fullerton Aves., Chicago, Ill.
- Smith Gas Engineering Co., The (Gas producers), Dayton, O.
- Smith, H. B., Co., The (Heating boilers and radiators), Westfield, Mass.; 1225 Arch St., Philadelphia; 138 Washington St., N. Boston; 39 E. Houston St., New York; Cambridge, Mass.
- Smith, H. B., Machine Co. (Woodworking mach'y), Smithville, N. J.; Chicago; New York; San Francisco, Cal.; Chicago; Atlanta.
- Smith, H. D., & Co., The (Hand tools), Plantsville, Conn.
- Smith & Hemenway Co. (Hand tools), 130 Colt St., Irvington, N. J.; 261 Broadway, New York, N. Y.



- Smith & Holtum Mfg. Co. (Cement tools), Clinton, Wis.
- Smith & Kanzler (Asbestos products), 514 Washington Ave., Elizabeth, N. J.
- Smith, Manning J., Belting Co. (Cotton belting), Germantown, Philadelphia, Pa.
- Smith Mfg. Co. (Gas engines), 161 W. Harrison St., Chicago, Ill.; Omaha; Minneapolis; Kansas City; Columbus; Indianapolis.
- Smith & Mills Co., The (Shaping machines), Spring Grove Ave., Township & Lillac Sts., Cincinnati, O.
- Smith, Philip, Mfg. Co. (Lathes), Sidney, O.
- Smith and Serrell (Couplings), 43 Central Ave., Newark, N. J.
- Smith, Otis A. (Washer cutters, etc.), Rockfall, Conn.
- Smith, Peter, Heater Co., The (Car heaters), 7595 Mt. Elliott, Detroit, Mich.
- Smith-Rhea Co., The (Elevators), Baltimore, Md.
- Smith, R. P. & Sons Co. (Foundrymen's shoes), 700 Kingsbury, Chicago, Ill.
- Smith & Robinson (Belt dressing), 412-20 Orleans St., Chicago.
- Smith, Samuel, & Son Co. (Boilers), Paterson, N. J.
- Smith, Seymour & Son (Bench stops), Oakville, Conn.
- Smith, S. Morgan, Co. (Steam turbines), York, Pa.; 176 Federal St., Boston; 76 W. Monroe St., Chicago, Ill.
- Smith System Heating Co. (Heating furnaces), Minneapolis, Minn.
- Smith, T. L., & Co., The (Mach'y), 1125 32d St., Milwaukee, Wis.; 455 Old Colony Bldg., Chicago; 50 Church St., New York; San Francisco.
- Smith, V. A., Co. (Heating boilers), 213 W. Lake St., Chicago, Ill.
- Smith, Werner G., Co., The (Core oil), Cleveland, O.; 1110 Conway Bldg., Chicago, Ill.; Boston, Cleveland, Detroit, Indianapolis, Moline, Philadelphia, San Francisco.
- Smith & Winchester Mfg. Co. (Paper mill mach'y), South Windham, Conn.
- Smokabate Service Co. (Boiler arches), 136 W. Lake St., Chicago, Ill.
- Smolensky Valve Company, The (Valves), Cleveland, Ohio.
- Smooth-On Mfg. Co. (Iron and steel cement), 572-574 Communipaw Ave., Jersey City, N. J.; 20 Sacramento St., San Francisco; 223 N. Jefferson St., Chicago.
- Smurr & Kamen Machine Co. (Screw machines), 328 N. Albany Ave., Chicago, Ill.
- Smyth-Despard Co. (Leather belting), Broad and John Sts., Utica, N. Y.
- Snap Detachable Belt Fastener Co. (Belt fasteners), 301 Market St., Newark, N. J.
- Snell, J. H. & Sons (Steam engines), Hamburg, Pa.
- Snell Mfg. Co. (Hand tools), Fliskdale, Mass.
- Snow Flexible Gasket Co. (Gaskets), 1035 N. Clark St., Chicago, Ill.
- Snyder, J. E., & Son (Drilling machines), Worcester, Mass.
- Sober, C. K. (Gas generators), Lewisburg, Pa.
- Sodemann Heat & Power Co. (Radiator shields), 2300-2308 Morgan St., St. Louis, Mo.
- Solarine Co. (Metal polish), 153 N. Carpenter St., Chicago, Ill.; New York; Baltimore.
- Solderall Co. (Solder), 129 Sussex Ave., Newark, N. J.
- So Luminum Mfg. & Eng. Co. (Aluminum solder), 1834 Broadway, New York, N. Y.
- Somerville Iron Works (Iron pipe and fittings), Somerville, N. J.; 122 S. Mich. Ave., Chicago; Woolworth Bldg., New York; Chattanooga, Tenn.
- Sonneborn, L., Sons, Inc. (Boiler compound, lubricants, etc.), 262 Pearl St., New York, N. Y.; Philadelphia; Baltimore; St. Louis; Boston.
- Sorge, A. Jr., & Co. (Power plant specialties), Monadnock Bldg., Chicago, Ill.
- Souder-Hornaby Co., Inc. (Temperature regulators), 401 Hazel St., Tamaqua, Pa.
- Soule Steam Feed Works (Steam engines and sawmill specialties), Meridian, Miss.
- South Atlantic Waste Co., Inc. (Waste), Charlotte, N. C.
- South Bend Foundry Co. (Sewer castings), W. Indiana Ave., South Bend, Ind.
- South Bend Lathe Works (Lathes), South Bend, Ind.; 37 N. 7th St., Philadelphia; 65 Oliver St., Boston, Mass.; 2½ Murray St., New York.
- South Chester Tube Co. (Iron pipe and fittings), Chester, Pa.
- South Haven Foundry & Machine Co., South Haven, Mich.
- South Park Foundry & Machine Co. (Radiators, boilers, etc.), 11 Giffillan Bldg., St. Paul.
- South Side Foundry & Machine Works Co. (Coal mining machinery), Charleston, W. Va.
- Southern Auto & Machinery Co. (Water supply outfits), 116-118 Roberts Ave., St. Louis, Mo.
- Southern Belting Co. (Leather belting), 184-190 So. Forsyth St., Atlanta, Ga.
- Southern Engine & Boiler Works (Engines, sawmill mach'y), Jackson, Tenn.
- Southern Fitting & Foundry Co. (Cast iron fittings), Savannah, Ga.
- Southern Pipe & Foundry Co., Inc., The (Soil pipe and fittings), Knoxville, Tenn.
- Southern Saw Works (Sawmill mach'y), Box 1577, Atlanta, Ga.; 820 Union St., New Orleans; 63 Broad St., New York.
- (See index to advertisement, pages 7, 8 and 9.)
- Southern Sheet & Tin Plate Co. (Tin and iron sheets), Ashland, Ky.
- Southern Skein & Foundry Co. (Jack screws), Chattanooga, Tenn.
- Southington Hardware Co., The (Carpenters' tools), Southington, Conn.
- Southington Mfg. Co., The (Hand tools), Southington, Conn.
- Southwark Foundry & Machine Co. (Engines, pumps, etc.), Washington Ave. and 6th St., Philadelphia, Pa.; Brown-Marx Bldg., Birmingham; Frick Bldg., Pittsburgh; 343 S. Dearborn St., Chicago.
- Southwick, Geo. W., Co., The (Belt lacing, dressing, etc.), Stamford, Conn.
- Sowers Mfg. Co. (Steam kettles, etc.), 1300 Niagara St., Buffalo; 68 Devonshire St., Boston; 25 Church St., New York; Widener Bldg., Philadelphia; Mchts. Exchange Bldg., San Francisco.
- Spafford Tool Works (Drilling attachments), Hartford, Conn.
- Spang, Chalfant & Co. (Steel pipe and tubes), 4th Ave. and Wood St., Pittsburgh, Pa.; Chicago; St. Louis; Philadelphia; San Francisco.
- Spang & Company (Engines and oil well equipment), Butler, Pa.; Cameron, W. Va.; Cisco, Texas; 205 Wood St., Clarksburg, W. Va.; 50 Church St., New York.
- Sparks Drilling Jar Co. (Well drilling tools), Charleston, W. Va.
- Sparta Iron Works Co. (Well drilling machines), Sparta, Wis.; Bowling Green, Ky.
- Sparta Mfg. Co., The (Water stills), 111 S. Hill St., South Bend, Ind.
- Spartan Saw Works (Hack saw blades), 41 Taylor St., Springfield, Mass.
- Spaulding, J., & Sons Co. (Friction boards), North Rochester, N. H.; 659 W. Lake St., Chicago; 15 Elkins St., Boston 27, Mass.
- Spaulding & Metcalf (Oil filters), 514 Arch St., Philadelphia, Pa.
- Spawn, B. A., & Co. (Drinking fountains), 340 Central Ave., Newark, N. J.
- Speakman Company (Plumbing goods), Riverview Works, Wilmington, Del.; 113 Market St., Wilmington; 156 Fifth Ave., New York; Monadnock Bldg., San Francisco.
- Spear, James, Stove & Heat Co. (Stoves and heaters), 1823 Market St., Philadelphia, Pa.
- Special Products Co. (Waste), Hopewell, Va.
- Specialty Bolt & Rivet Works (Bolts, screws, etc.), 132 Hillside Ave., Shelton, Conn.
- Specialty Engineering Co. (Coal yard equipment), Allegheny and Trenton Aves., Philadelphia, Pa.
- Specialty Device Co. (Pole line hardware), 106 W. 3d St., Cincinnati, O.
- Specialty Mfg. Co. (Saw tables), South Norwalk, Pa.
- Specialty Mfg. Co. (Hose reels), St. Paul, Minn.
- Speer Carbon Co. (Carbon brushes), St. Marys, Pa.
- Speer Gas Machine Mfg. Co. (Gas machines), 412-413 Bumiller Bldg., Los Angeles, Cal.
- Speidel, J. G. (Hoists, elevators, etc.), Buttonwood and Gordon Sts., Reading, Pa.
- Spencer Regulator Co. (Vises), Derby & Liberty St., Salem, Mass.
- Spencer Turbine Co., The (Vacuum cleaners), 484 New Park Ave., Hartford, Conn.
- Sperry, D. R., & Co. (Mauls), Batavia, Ill.
- Spicer Mfg. Co. (Universal joints), Plainfield, N. J.; 50 Church St., New York.
- Spiral Boiler & Radiator Co. (Radiators), 998 Raymond Ave., St. Paul, Minn.
- Sportsman's Shot Works (Lead pipe, traps, etc.), Court and Harriet Sts., Cincinnati, O.
- Sprague Electric Works of General Electric Co. (Electrical mach'y), 527-31 W. 34th St., New York, N. Y.; Chicago; Philadelphia; Boston; Baltimore; Pittsburgh; Atlanta; San Francisco; St. Louis; Milwaukee; Seattle; Los Angeles; Cleveland; Cincinnati; Portland; Los Angeles; Spokane; Seattle.
- Sprague Meter Co., The (Gas meters), Bridgeport, Conn.; Davenport, Ia.; San Francisco, Cal.; Los Angeles, Cal.
- Spray Engineering Co. (Spray nozzles), 93 Federal St., Boston, Mass.
- Spring, L. & W., Co. (Mach'y springs), 210 Centre St., New York, N. Y.
- Springfield Auto Screw Mch. Corp. (Automatic screw machines), Fitchburg, Mass.
- Springfield Belting & Supply Co., The (Leather belting), Worthington St., Springfield, Mass.
- Springfield Boiler Co. (Boilers), Springfield, Ill.; Chicago; New York, N. Y.
- Springfield Machine Tool Co., The (Metal working mach'y), 631 Southern Ave., Springfield, O.
- Springfield Mfg. Co. (Grinding mach'y), 317 Mountain Grove Ave., Bridgeport, Conn.
- Springfield Tool Co. (Special tools), Springfield, Mass.
- Springfield Waste Co. (Waste), 109 Mill St., Springfield, Mass.
- Springfield Webbing Co. (Cotton webbing), Springfield, Mass.

- Sprout, Waldron Co. (Flour mill and transmission mach'y), Muncy, Pa.  
 Squier, Geo. L., Mfg. Co. (Sugar and rice mill mach'y), 490 Broadway, Buffalo, N. Y.  
 Squires, C. E., Co., The (Steam traps, etc.), 40th St. and Kelly Ave., Cleveland, O.  
 Squires Filter Co. (Water filters), Dayton, Ohio.  
 Stacey Mfg. Co., The (Iron pipe and fittings), Big Four R.R. and Township Ave., Elmwood, Cincinnati, O.; 718 Mission St., San Francisco.  
 Stack Heater Co. (Water heaters), 39 Sudbury St., Boston, Mass.  
 Staff Brother Co. (Wrenches), 1765 Broadway, New York, N. Y.  
 Stafford, E. H., Mfg. Co. (Car movers), 218 S. Wabash Ave., Chicago, Ill.  
 Stahl Gear & Machine Co. (Gears), 1390 E. 40th St., Cleveland, O.  
 Stamford Foundry Co. (Heating furnaces), 117-149 Canal St., Stamford, Conn.  
 Stamford Gas Stove Co. (Gas stoves and heaters), Stamford, Conn.  
 Stamford Rolling Mills Co. (Sheet brass, etc.), 347 Madison Ave., New York City.  
 Stamp Electric Hoist Co. (Hoists and cranes), 1500 17th St., San Francisco, Cal.  
 Standard Alloys Co. (Tool steel), Forbes and Meyram Aves., Pittsburgh, Pa.  
 Standard Asbestos Mfg. Co. (Pipe covering), 822 W. Lake St., Chicago, Ill.  
 Standard Bolt Co. (Iron bolts), Columbus, O.  
 Standard Brass Casting Co. (Plumbing brass goods), 3rd and Jefferson Sts., Oakland, Cal.  
 Standard Brass & Iron Works (Catch basin traps), 1618 St. Paul Ave., Milwaukee, Wis.  
 Standard Brass Works (Air, gas and water brass goods), 2931 Wight St., Detroit, Mich.  
 Standard Brass Mfg. Co. (Plumbing brass goods), Mann Blk., Utica, N. Y.  
 Standard Cast Iron Pipe & Foundry Co. (Iron pipe), Bristol, Pa.  
 Standard Chemical Co. (Boiler compound), Kalamazoo, Mich.  
 Standard Conveyor Co. (Conveyors, elevators), North St. Paul, Minn.; 39-41 Cortland St., New York, N. Y.; 549 W. Washington St., Chicago, Ill.; 829 Oliver Bldg., Pittsburgh, Pa.; 1014 Citizens Bldg., Cleveland, O.; 141 E. 4th St., Cincinnati, O.  
 Standard Crayon Mfg. Co. (Crayons), Danvers, Mass.  
 Standard Diamond Drill Co. (Drills), 38 S. Dearborn St., Chicago, Ill.  
 Standard Electric Tool Co., The (Electric tools), Cincinnati, O.; 1328 Broadway, New York.  
 Standard Electric & Elevator Co. (Elevators), 123 S. Calvert St., Baltimore, Md.  
 Standard-Elsmere Granite Co. (Laundry trays), 1754 N. Spaulding Ave., Chicago, Ill.  
 Standard Engineering Co. (Pipe threading mach'y), Ellwood City, Pa.; 1012 Chemical Bldg., St. Louis; 911 Mutual Sav. Bank Bldg., San Francisco.  
 Standard Engineering Works (Hand millers), Pawtucket, R. I.  
 Standard Fibre Co. (Hard fibre), Somerville, Mass.  
 Standard Foundry Co. (Soil pipe and fittings), Aniston, Ala.  
 Standard Fuel Engineering Co. (Furnaces and heating appliances), 667 Post Ave., S., Detroit, Mich.; 172 Fulton St., New York; 314 Sloan Bldg., Chicago; 909 Excelsior Life Bldg., Toronto.  
 Standard Gas Engine Co. (Gas engines), Oakland, Cal.; 261 6th St., San Pedro, Cal.  
 Standard Gas Engine Works (Gasoline engines), 121 Front St., Erie, Pa.  
 Standard Gauge Mfg. Co., The (Gauges), Foxboro, Mass.; 50 Church St., New York; 762 Monadnock Bldg., Chicago.  
 Standard Gauge Steel Co. (Shaft couplings, etc.), Beaver Falls, Pa.; 1240 Old Colony Bldg., Chicago; 910 Pennsylvania Bldg., Philadelphia; 1503 Kresge Bldg., Detroit.  
 Standard Granitine Works (Laundry tubs), 1752-1756 North Spaulding Ave., Chicago, Ill.  
 Standard Heater Co., The (Heating boilers), Williamsport, Pa.; New York, Buffalo, Boston, Detroit, Philadelphia, Denver, Baltimore, Chicago.  
 Standard Heating Co. (Warm air furnaces), 453 N. Racine Ave., Chicago.  
 Standard Heating & Radiator Co. (Fuel oil burners, etc.), 220 Penn Ave., Pittsburgh, Pa.  
 Standard Iron Works (Vise benches), 508-10 E. 74th St., New York, N. Y.  
 Standard Iron Works (Shaft couplings), Sherman, N. Y.  
 Standard Machine Tool & Supply Co. (Variety wood-workers), Kansas City, Mo.  
 Standard Machinery Co. (Machines), Elmwood Sta., Providence, R. I.; Auburn, R. I.  
 Standard Mfg. Co., Springfield, Mass.  
 Standard Mfg. Co. (Brazing compound), 318 S. Canal St., Chicago, Ill.  
 Standard Mfg. Co. (Oil and tar sprayers), 186 Union St., Worcester, Mass.  
 Standard Mfg. & Supply Co. (Gaskets), 30 N. 4th St., Philadelphia, Pa.  
 Standard Mfg. & Sales Co. (Grease cups), 1325 Arch St., Philadelphia, Pa.  
 Standard Meter Co., The (Gas meters), 3112 N. 17th St., Philadelphia, Pa.; 718 Mission St., San Francisco; National Supply Co. of Kansas, Independence, Kan.  
 Standard Meter & Mfg. Co. (Water meters), 433 W. 42d St., New York, N. Y.  
 Standard Natural Ventilator Co. (Ventilators), 502 Merrill Bldg., Milwaukee, Wis.  
 Standard Nipple Co. (Nipples), Hamburg, Pa.  
 Standard Nut & Bolt Co. (Bolts, screws, nuts, etc.), Valley Falls, R. I.  
 Standard Oil Co. of New York (Plumbers' candles), 555 W. 25th St., New York, N. Y.  
 Standard Optical Co. (Safety goggles), Geneva, N. Y.  
 Standard Packings Co. (Sheet packings), 407 Marion Bldg., Cleveland, O.  
 ♦ Standard Pressed Steel Co. (Shaft hangers, etc.), Jenkintown, Pa.; Chicago, Ill.; Boston, Mass.; New York, Atlanta.  
 Standard Pulley Co. (Cast iron pulleys), 1738 Powers St., Cincinnati, O.  
 Standard Pump & Engine Co., The (Power pumps and engines), 730 Carroll St., Akron, O.; 328 Champlain Ave., Cleveland.  
 Standard Regulator Co. (Pressure regulators), 286 South St., Newark, N. J.; 1823 Land Title Bldg., Philadelphia; 906 Empire Bldg., Pittsburgh; Chemical Bldg., St. Louis.  
 Standard Rolling Mills, Inc. (Babbitt metals, etc.), 363 Hudson Ave., Brooklyn, N. Y.  
 Standard Sand & Machine Co. (Sand mixers), 5151 St. Clair Ave., Cleveland, Ohio.  
 Standard Sanitary Mfg. Co. (Plumbers' supplies), Bessemer Bldg., Pittsburgh, Pa.; 35 W. 31st St., New York; 186 Devonshire St., Boston; 1216 Walnut St., Philadelphia; 200 Southern Bldg., Washington, D. C.; 106 Sixth St., Pittsburgh; 14-30 North Peoria St., Chicago; 100 North Fourth St., St. Louis; 648-652 Huron Rd., S.E., Cleveland; 633 Walnut St., Cincinnati; 311-321 Erie St., Toledo; West Eleventh St., Erie; 319-323 W. Main St., Louisville; 315-317 Tenth Ave., S., Nashville; 846-866 Baronne St., New Orleans; Preston and Smith St., Houston; 212-216 Losoya St., San Antonio; Front and Jones Sts., Fort Worth; 719-23 Rialto Bldg., San Francisco; 59 Richmond St., E., Toronto, Can.; 20-28 Jackson St., W., Hamilton, Can.; 215 Coristine Bldg., Montreal; 57-60 Holborn Viaduct, E.C., London, Eng.  
 Standard Sanitary Pottery Co., The (Sanitary earthenware), Elizabeth, N. J.  
 Standard Sawmill Machinery Co. (Sawmill mach'y), Erie, Pa.; 71 Beaver St., New York, N. Y.  
 Standard Saw & Tool Mfg. Co., Inc. (Hack saw blades), 10 Damrell St., Boston 27, Mass.; 546 W. Wash. Blvd., Chicago.  
 Standard Scale & Supply Co., The (Scales and trucks), 1681 Liberty Ave., Pittsburgh, Pa.; 145 Chambers St., New York; 523 Arch St., Philadelphia; 1547 Columbus Rd., Cleveland; 163-71 N. May St., Chicago; 3027 Elm St., Dallas, Tex.  
 Standard Seamless Tube Co. (Steel tubing), Ambridge, Pa.; 154 Nassau St., New York.  
 Standard Shop Equipment Co. (Set-up appliances), 23rd & Hunting Park Ave., Philadelphia, Pa.  
 Standard Smelting & Refining Co. (Babbitt and solder), 547-549 West 21st St., New York.  
 Standard Steam Specialty Co. (Steam specialties), 2531 West 48th St., Chicago; 90 West St., New York; 16th and Texas Sts., San Francisco.  
 Standard Steel Tube Co. (Steel tubing), Toledo, O.  
 Standard Steel & Bearings, Inc. (Ball bearings), 50th & Lancaster Ave., Philadelphia; Kresge Bldg., Detroit; 646 N. Meridian St., Indianapolis; 1806 S. Mich. Ave., Chicago; 251 Rialto Bldg., San Francisco.  
 Standard Stoker Co., Inc. (Locomotive stokers), Du Pont Bldg., Wilmington, Del.; Grand Central Terminal, New York.  
 Standard Tank & Seat Co., Inc. (Tanks and seats), 314-318 N. Front St., Camden, N. J.  
 Standard Thermometer Co. (Thermometers), 65 Shirley St., Boston, Mass.; Detroit, Mich.  
 ♦ Standard Tool Co., The (Machinists' tools), 6900-7000 Central Ave., Cleveland, O.; 94 Reade St., New York; 552 W. Washington Blvd., Chicago, Ill.; 1101 Scollay Sq. Bldg., Boston, Mass.; 401 Liberty Bldg., Philadelphia.  
 Standard Union Co. (Unions), 7 Water St., Boston, Mass.  
 Standard Ventilator Co. (Ventilators), Lewisburg, Pa.  
 Standard Waste Mfg. Co. (Cotton waste), 3067 E. 61st St., Cleveland, O.  
 Standard Water System Co. (Distilling apparatus), Hampton, N. J.; 90 West St., New York, N. Y.  
 Standard Wire Co., The (Electric lamp guards), New Castle, Pa.  
 Standard Wood Pipe Co. (Water pipe), Williamsport, Pa.  
 Standardized Products Co. (Disinfectants and soaps), 2635 Cottage Grove Ave., Chicago, Ill.

- Stanley Belting Corp. (Textile belting), 32 S. Clinton St., Chicago.
- Stanley Hoist & Machine Co. (Hoisting machinery), 620 W. 25th St., New York, N. Y.
- Stanley, John T., Inc. (Hand soap), 628-652 West 30th St., New York, N. Y.
- Stanley Rule & Level Plant, Atha Dept. (Rules and levels), New Britain, Conn.
- Stanley Universal Wrench Co., The (Chain pipe wrenches), Alliance, O.
- Stanley Works, The (Brackets, hinges, screws, etc.), New Britain, Conn.; 73 E. Lake, Chicago; 100 Lafayette St., New York; Atlanta, Los Angeles, Seattle.
- Star Bit & Tool Co. (Bits, chisels, etc.), Rockford, Ill.
- Star Brass Mfg. Co. (Brass goods), 53 Oliver St., Boston, Mass.; 819 Fulton Bldg., Pittsburgh; 70 Cortlandt St., New York; 6 East Lake St., Chicago.
- Star Coupler Co. (Couplings, pipe), 4236 Easton Ave., St. Louis, Mo.
- Star Drilling Machine Co., The (Well drills, steam jet blowers), 475 Washington Sts., Akron, O.; Chanute, Kans.; Long Beach, Cal.; Portland, Ore.; New York.
- Star Expansion Bolt Co. (Expansion bolts, etc.), 147 Cedar St., New York, N. Y.; 112 W. Lake St., Chicago; 700 E. Third St., Los Angeles; 20 Colman Dock, Seattle.
- Star Fan & Motor Works (Fans and motors), E. Kinney and Orchard Sts., Newark, N. J.
- Star Felt Cutting Co., The (Felt specialties), 69th St. and Third Ave., Brooklyn, N. Y.
- Star Machinery Co. (Engines), 1731-1741 S. 1st Ave., S. Seattle.
- Star Mfg. Co., The (Pipe unions), 71 Willard St., Providence, R. I.
- Star Mfg. Co., The (Gas engines), New Lexington, O.
- Star Mfg. Co. (Hand soap), 331 Summer St., Stamford, Conn.
- Star Oil Co., The (Oils), 348 N. Irving Ave., Chicago, Ill.
- Star Pointer Pump Mfg. Co. (Spray pumps), Menasha, Wis.
- Star Rubber Co. (Tires), Akron, Ohio; Kansas City, New York, San Francisco.
- Starbuck, R. M., & Sons (Plumbers' specialties), 63 Asylum St., Hartford, Conn.
- Stark Tool Co., Waltham, Mass.
- Starrett, L. S., Co., The** (Machinists' fine tools), Athol, Mass.; 92 W. Broadway, New York; 17 N. Jefferson St., Chicago.  
(See index to advertisement, pages 7, 8 and 9.)
- Staso Milling Co. (Pipe joint cement), 736 Oliver Bldg., Boston, Mass.
- State Mfg. Co. (Boiler compound), 3545 E. 76th St., Cleveland, Ohio.
- Staybestos Mfg. Co. (Asbestos facings, etc.), Germantown Ave. & Berkley St., Philadelphia, Pa.
- Steam Appliance Co., The (Steam specialties), 63d Ave. and N. W. R. R., West Allis, Wis.
- Steam Economy Co. (Steam specialties), 717 Bowen Ave., Chicago, Ill.
- Steam Motor Co., The (Steam turbines), Springfield, Mass.; Boston; New York; Philadelphia; Pittsburgh; Cleveland; Cincinnati; Chicago; Rochester; St. Louis; San Francisco; Detroit; New Orleans; Denver; Seattle.
- Steam Supply & Rubber Co. (Oil burners), 308 First Ave. So., Seattle, Wash.; Tacoma.
- Stearns, E. C., & Co. (Hardware), Syracuse, N. Y.
- Stearns Motor Mfg. Co. (Farm lighting plants), Ludington, Mich.
- Stearns-Roger Mfg. Co., The (Mach'y), 1720 California St., Denver, Colo.
- Stebbins, E., Mfg. Co. (Plumbing brass goods), Springfield, Mass.
- Stebbins Hardware Co. (Catch basin cleaners), 15 W. Van Buren St., Chicago, Ill.
- Stecher, Chas., Co., The (Bench drilling machines), 2317 N. Knox Ave., Chicago, Ill.
- Stedman's Fdy. & Machine Works, The (Crushing Mach'y), Aurora, Ind.
- Steel Barrel Co. of America (Steel barrels), 29 Broadway, New York, N. Y.
- Steel Basket & Specialty Co. (Steel baskets), Cedar Rapids, Iowa.
- Steele, J. C., & Sons (Brick and tile mach'y), Statesville, S. C.; 68 Broad St., New York; 510 Reliance Bldg., Kansas City, Mo.
- Steel Mill Packing Co. (Packings), 238-42 W. Jefferson Ave., Detroit, Mich.
- Steel Products Co. (Screws and bolts), 2206 Clarkwood Ave., S. E., Cleveland, O.; Detroit, Mich.
- Steel Sales Corp. (Monel metal), 129 S. Jefferson St., Chicago, Ill.
- Steel Scaffolding Co. (Steel scaffolding), Evansville, Ind.
- Steel Specialties Co. (Nut lock washers), Wakefield, Mass.
- Steel Tank & Products Corporation, 26 N. Jefferson St., Chicago.
- Steel Truck Co. (Factory trucks), Howell, Mich.
- Steel & Tube Company of America, The (Tubular goods), 111 W. Washington St., Chicago, Ill.
- Steigert, L., Co. (Alarms and indicators), Elder and Logan Sts., Cincinnati, O.
- Steiner, E. E., & Co., Inc. (Ovens), 2 16th Ave. "C" Newark, N. J.
- Steiner, Emil F. (Japanning ovens), 58 Union St., Newark, N. J.
- Steinle Turret Machine Co. (Machine tools), Madison, Wis.
- Stephenson, C. H. (Ash receptacles), 27 Farrar St., Lynn, Mass.
- Stephen-Adamson Mfg. Co. (Conveying and transmission mach'y), Aurora, Ill.
- Stephens Mfg. Co. (Heating boilers), 1026 South Grand Ave., Los Angeles, Cal.
- Stephens Nut & Bolt Co. (Flat link chains), Central Falls, R. I.
- ♦ Stephenson Mfg. Co. (Belt dressing), Albany, N. Y.
- Stephenson Mfg. Co. (Gas stoves), 207-209 Sandusky St., Allegheny, Pa.
- Steptoe, John, Co. (Shaping machines), 2951 Colerain Ave., Cincinnati, O.
- Sterling Aluminum Solder Co., Inc. (Solder), 501 Eleventh St., Brooklyn, N. Y.; 200 Broadway, New York, N. Y.
- Sterling Blower Co., The (Exhaust heads), 60 618 Windsor St., Hartford, Conn.; 30 Church St., New York, Boston, Philadelphia, Rochester.
- Sterling Brass Co., The (Plumbing brass goods), 47th St. and St. Clair Ave., Cleveland, O.
- Sterling Electrical Corp. (Electric heaters), 1284 W. 3d St., Cleveland, O.
- Sterling Engine Co. (Marine motors), 1252 Niagara St., Buffalo, N. Y.
- Sterling Engineering Co.** (Heating specialties), 419 3rd St., Milwaukee, Wis.
- Sterling Equipment & Supply Co. (Boiler compounds), 245 Race St., Philadelphia, Pa.
- Sterling Grinding Wheel Co. (Wheels and tool grinders), Tiffin, O.; 30 N. Clinton St., Chicago, New York.
- Sterling Products Co., Inc. (Hack saw blades), 35 So. Desplaines St., Chicago, Ill.
- Sterling & Skinner Mfg. Co., The (Plumbing brass goods), 2672 E. Grand Blvd., Detroit, Mich.
- Sterling Specialty Co. (Plumbing brass goods), Newcomerstown, O.; 407 Curry Bldg., Pittsburgh, Pa.
- Sterling Wheelbarrow Co. (Wheelbarrows, etc.), 64th and Pullen Ave., West Allis, Wis.; Boston, Chicago, Cleveland, Detroit, New York, Spokane, St. Louis.
- Stetson-Ross Machine Works (Woodworking mach'y), Seattle, Wash.
- Stevens Mfg. Co. (Screw machine products), Third & Canal Sts., Dayton, O.
- Stevenson, E. S., Bros. (Water heaters), New Castle, Pa.
- Stevenson Gear Co. (Gear cutting machines), Indianapolis, Ind.
- Stevenson's, W. J., Improved Sewer Cleaning Machine Co. (Machinery sewer cleaning), 1720 Cedar St., Milwaukee, Wis.
- Steward, D. M., Mfg. Co. (Gas burners), Chattanooga, Tenn.; 151 Kings St., W., Toronto.
- Steward & Romaine Mfg. Co., The (Screws, washers, bolts, etc.), 124 N. 8th St., Philadelphia, Pa.
- Stewart, A. F. & S. C. (Fire engines), Rochester, N. Y.
- Stewart, A. R. (Lathe attachments), 101 Greenway Ave., Nashville, Tenn.
- Stewart Iron Works Co., The (Motor trucks and iron work), Cincinnati, Ohio.
- Stewart, S. A., & Co. (Metal working machines), Waltham, Mass.
- Stickermen's Rule Co. (Board and log rules), 1604 E. Joseph Ave., Spokane, Wash.
- Stiles, H. A. & Co. (Wooden handles, etc.), 97 Oliver St., Boston, Mass.
- Stillman-Carmichael Co. (Damper regulator), 19 Pearl St., Boston, Mass.
- Stimpson, Edwin B., Co. (Sheet metal working mach'y), 92 Franklin Ave., Brooklyn, N. Y.
- Stine, J. C., Co., The (Fans, ventilators, mining mach'y), Tyrone, Pa.
- Stine, S. B. (Mine fans and other mine appliances), Osceola Mills, Pa.
- Stine Screw Holes Co., The (Screw holes), Lock Box 1216, Waterbury, Conn.
- Stockbridge Machine Co. (Machine tools), Worcester, Mass.
- Stocker, George J. (Cooling towers), Odell St. & Kingshighway, St. Louis, Mo.
- Stoecker Concrete Material Washer Co. (Gravel washers), Highland, Ill.
- ♦ Stockham Pipe & Fittings Co. (Cast iron pipe and fittings), Birmingham, Ala.
- Stockland Road Machine Co. (Road mach'y), Minneapolis, Minn.
- Stodder, W. F. (Sand blast nozzles), P. O. Box 747, Syracuse, N. Y.
- Stoecklin, Ernest (Tool holders), Ridgefield Park, N. J.
- Stokes Bros. Mfg. Co. (Files and rasps), Freehold, N. J.
- Stoll, D. H., Co., Inc., The (Sheet metal mach'y), 26 Lansing St., Buffalo, N. Y.
- Stone Mark, Mfg. Co. (Plumbers' brass goods), Grand Rapids, Mich.



- Stonehouse Steel Sign Co. (Danger signs), 1726 Lawrence St., Denver, Colo.
- Storch & Scheid (Cesspools, vent boxes, etc.), 1102 Wolf St., Philadelphia, Pa.
- Storm Mfg. Co., The (Elevators), 48 Vesey St., Newark, N. J.
- Stover Mfg. & Eng. Co. (Gas engines), Freeport, Ill.; Omaha, Minneapolis, Indianapolis, Kansas City, Mo.
- Stover Steel Tank Co. (Steel tanks), Freeport, Ill.; 1454 Monadnock Bldg., Chicago, Ill.
- Stow Flexible Shaft Co. (Flexible shaft tools), 3446 Ludlow St., Philadelphia, Pa.
- Stow, H. J. (Belt fasteners), 160 N. Wells St., Chicago, Ill.
- Stow Manufacturing Co., Inc. (Flexible shafting), 443 State St., Binghamton, N. Y.
- Stowe, Geo. M., Jr. (Sand blast machinery), 65 Main St., Buffalo, N. Y.
- Stowell, Co., The (Grate bars and castings), South Milwaukee, Wis.; 800 Spruce St., St. Louis; Continental Bldg., Denver; Scott-Strevel Bldg., Salt Lake City; Monadnock Bldg., San Francisco; Equitable Nat'l Bldg., Los Angeles.
- Strait, H. N. Mfg. Co., The (Gas engines), Band St., Kansas City, Kan.
- Strait & Richards, Inc. (Gas logs), Newark, N. J.
- Strait Scale Co. (Scales), Shawnee, Adams & Baird Sts., Kansas City, Kan.
- Strand, N. A. & Co. (Portable grinders), 549 W. Washington Blvd., Chicago, Ill.
- Strandwitz & Scott (Exhaust heads), Camden, N. J.
- Strater, Herman, & Sons (Air compressors, etc.), 70-74 Sudbury St., Boston, Mass.; 136 E. 42d St., New York.
- ♦ Stratford, Geo., Oakum Co. (Oakum and friction boards), 160 Cornillon Ave., Jersey City, N. J.; 95 Broad St., New York, N. Y.; 1335 Real Estate Trust Bldg., Philadelphia, Pa.; Cobalt, Can. (See index to advertisement, pages 7, 8 and 9.)
- Stratton & Bragg Co. (Anti-friction metal), Petersburg, Va.
- Stratton Fire Clay Co. (Closet hoppers), Empire, O.
- Stratton Mfg. Co. (Tool handles), Stratton, Me.
- Straus Boilergene Co. (Boiler compound), 50 Church St., New York, N. Y.
- Strauss, E. (Hand drills), 322 Macon St., Brooklyn, N. Y.
- Strauss & Buegeleisen, 16 Hanover Pl., Brooklyn, N. Y.; 1507 Mission St., San Francisco; Hamilton, Canada.
- Street Brothers Machine Works (Engines, hoists), Chattanooga, Tenn.
- Street & Kent Mfg. Co. (Plumbing brass goods), Clybourn and Clifton Ave's, Chicago, Ill. (See index to advertisement, pages 7, 8 and 9.)
- Streich, A. & Bro., Co. (Trucks, etc.), Oshkosh, Wis.; 663 W. Lake St. Chicago.
- Streich, G. (Lumber buggies), Oshkosh, Wis.; 663 W. Lake St., Chicago, Ill.
- Streine Tool & Mfg. Co. (Sheet metal mach'y), New Bremen, O.
- Stringer Bros. Foundry Co. (Plumbing supplies), 122 S. Michigan Ave., Chicago.
- Strite Governor Pulley Co. (Pulley governors), 307 Third St., S., Minneapolis, Minn.
- Strite Tractor Co. (Tractor engines), Minneapolis.
- Strombeck-Becker Mfg. Co. (Tool handles), 51st St. and 4th Ave., Moline, Ill.
- Strong, Carlisle & Hammond Co., The (Valves, steam traps and regulators), 1392 West 3rd St., Cleveland, O.; 200 Congress St., Boston; New York; Philadelphia; Detroit, Mich.; Chicago; Pittsburgh.
- Strong, Homer (Leather belting), 301-7 State St., Rochester, N. Y.
- Strong Machinery & Supply Co. (Packings), 21 Walker St., New York, N. Y.
- Strong Metal Products Co. (Hardware specialties), 1011-51 Power Ave., Cleveland.
- Strong, Scott Mfg. Co. (Flour mill mach'y), Minneapolis, Minn.; Great Falls, Mont.; Winnipeg.
- Strong Steel Foundry Co. (Steel castings), Buffalo, N. Y.
- Strong, Wm. J. H. (Steam flash boilers), 564 W. Monroe St., Chicago, Ill.
- Stroud, E. H. & Co. (Grinding mach'y), 928-34 Fullerton Ave., Chicago, Ill.
- Stroudsburg Engine Works, The (Hoisting engines), Stroudsburg, Pa.
- Structural Slate Co., The (Structural slate), Pen Argyle, Pa.
- Struthers-Wells Co. (Gas engines), Warren, Pa.; 50 Church St., New York.
- Stuart, D. A., & Co. (Lubricating oils), 2727 So. Troy St., Chicago; 342 Kenwood Ave., Dayton, O.; 13417 Fourth Ave., Cleveland, O.; 205 Kresge Bldg., Detroit.
- Stuart Foundry Co. (Sewer castings), 138 So. Junction Ave., Detroit, Mich.
- Stuart & Peterson Co., The (Warm air heating furnaces), Burlington, N. J.
- Stubin Geyser Electric Water Heater Co. (Water heaters), Steubenville, Ohio.
- Stuebner Truck Co., The (Factory trucks), 321 East Court St., Cincinnati, O.
- Stuebner, G. L., Iron Works (Elevating buckets), West 12th St., Long Island City, N. Y.
- Stulp, Fred J. (Hose menders), 220 Sanford St., Muskegon, Mich.
- Stupakoff Laboratories Co. (Pyrometers), 6617-6627 Hamilton Ave., Pittsburgh, Pa.
- Sturdi Truck Mfg. Co., Inc. (Trucks), Holyoke, Mass.
- Sturgis Company (Shower baths), Sturgis, Mich.
- Sturtevant, B. F., Co. (Blowers, engines, etc.), Hyde Park, Boston, Mass.; New York; Chicago; Pittsburgh; Atlanta; Buffalo; Cincinnati; Cleveland; Dallas; Detroit; Hartford; Kansas City; Los Angeles; Minneapolis; Philadelphia; Rochester; St. Louis; Salt Lake City; Washington; San Francisco; Seattle; Montreal; Toronto.
- Sturtevant Mill Co. (Mining mach'y), Harrison Sq., Boston, Mass.; Singer Bldg., New York; Peoples Gas Bldg., Chicago; Healey Bldg., Atlanta.
- Success Mfg. Co. (Grease traps), Gloucester, Mass.
- Success Novelty Co., The (Lubricators), 618 E. Cary St., Richmond, Va.
- Suffern Broom Co. (Factory brooms), Springfield, Ill.
- Sullivan Machinery Co. (Drills and mach'y), 122 S. Michigan Ave., Chicago, Ill.; Birmingham; Butte; Denver; El Paso; Joplin; Knoxville; New York; Pittsburgh; St. Louis; Salt Lake City; San Francisco; Spokane.
- Summer Engine Co. (Gas engines), Fairmont, Mass.
- Summerill Tubing Co., The (Seamless steel tubing), Bridgeport, Pa.
- Summitt Machine Works (Lathes), Worcester, Mass.
- Sumner, William, Belting Co., The (Leather belting), Tolland, Conn.; 62 Cortland St., New York.
- Sun Company (Oils), Philadelphia, Pa.
- Sunbeam Electric Mfg. Co. (Electric lighting plants), Read St. & Morgan Ave., Evansville, Ind.; 52 Vanderbilt Ave., New York; Philadelphia; Chicago; Minneapolis; San Francisco.
- Sundh Electric Co. (Tank switches), 209 Parkhurst St., Newark, N. J.; Peoples Gas Bldg., Chicago.
- Sunlight Gas Machine Co., Inc. (Gas generators), 63 Summit St., Brooklyn, N. Y.
- Sunshine Jasper Co., 59 E. 8th St., New York, N. Y.
- Sun Shipbuilding Co., Wetherill Plant (Engines and boilers), Chester, Pa.
- Sun Vapor & Gas Street Light Co., The (Gas lamps), Canton, O.
- Superheater Co., The (Steam superheaters), 17 E. 42nd St., New York; Boston, Chicago, Pittsburgh.
- Superior Boiler Works (Boilers and tank), Marion, Ind.
- Superior Brass Novelty Co. (Brass plumbing goods), 545 E. 116th St., New York.
- Superior Corundum Wheel Co. (Grinding wheels), Waltham, Mass.
- Superior Flake Graphite Co. (Flake graphite), 76 W. Monroe St., Chicago. (See index to advertisement, pages 7, 8 and 9.)
- Superior Gas Engine Co. (Gas engines), Springfield, O.
- Superior Iron Works Co. (Boiler grates), Superior, Wis.
- Superior Leather Belting Co. (Leather belting), 307 Pearl St., New York.
- Superior Light & Heat Co. (Gas generators), 330 S. San Pedro St., Los Angeles, Cal.
- Superior Machine & Boiler Works (Heating boilers), Superior and Green Sts., Chicago, Ill.
- Superior Machine & Engineering Co. (Drill heads), 451 Fort St., E., Detroit, Mich.
- Superior Machine Tool Co., The (Drilling machines), Kokomo, Ind.
- Superior Mfg. & Mill Co. (Gas engines and feed mills), Springfield, Ohio.
- Superior Mfg. Co. (Rubber elbows), 5723 W. Huron St., Chicago, Ill.
- Superior Mfg. Co. (Gas logs), Cor. Liverpool & Oxline Sts., Pittsburgh, Pa.
- Superior Motor Works (Marine engines), Jackson, Mich.
- Superior Pipe Co. (Cast iron pipe), Bessemer, Ala.
- Superior Pulley Co. (Paper pulleys), 17 S. First St., St. Louis, Mo.
- Superno Co., Inc. (Superheaters), 52 Broadway, New York.
- Surrell Down Draft Boiler Co. (Power boilers), 86 Liberty St., New York, N. Y.
- Surdy Mfg. Co., Inc., The (Machinery guards), 4139 W. Kinzie St., Chicago, Ill.
- Susquehanna Iron Co. (Wrought iron pipe), Columbia, Pa.
- Sutherland, F. L., Co. (Mechanical leather goods), 743 Beaubien St., Detroit, Mich.
- Sutherland Tool Co. (Milling cutters), Greenville, Mich.
- Swaby Mfg. Co. (Pumps and valves), 2010 Marshall Blvd., Chicago, Ill.
- Swaine, Fred J., Mfg. Co., The (Presses and dies), 7th and O'Fallon Sts., St. Louis, Mo.
- Swan, Jas., Co. (Small tools), Seymour, Conn.; 100 Lafayette St., New York.

Swan & Finch Co. (Oils and greases), 522 Fifth Ave., New York, N. Y.; Boston; Buffalo; Chicago; Detroit; Cleveland; Syracuse; Philadelphia; Atlanta; Pittsburgh; San Francisco; Toronto.

Swartz Electric Co. (Electric lighting outfits), Speedway, Indianapolis, Ind.

Swayne, Robinson & Co. (Baling presses), Richmond, Ind.

Sweeney, W. H., Mfg. Co. (Bathroom fittings), 30 Main St., Brooklyn, N. Y.

Sweetland Waste Co. (Cotton waste), 134 Tudor St., South Boston, Mass.

Swett, A. L., Iron Works (Washers, screws and fasteners), Glenwood Ave., Medina, N. Y.

Swett, Frank W. & Son (Band saw blades), 1716 W. Adams St., Chicago, Ill.

Swift Lubricator Co., The (Lubricators), 729 Second St., Elmira, N. Y.

Swivel Hose Coupling Co. (Hose couplings), 110 S. Dearborn St., Chicago, Ill.

Symonds Register Co. (Warm air registers), 3121 Minnesota Ave., St. Louis, Mo.

Syracuse Chilled Plow Co., Inc. (Ash barrows), Syracuse, N. Y.

Syracuse Gear Co. (Gears), Syracuse, N. Y.

Syracuse Industrial Gas Co. (Gas producers), 206 McCarthy Bldg., Syracuse, N. Y.

Syracuse Sander Mfg. Co. (Sanding and polishing machines), 1234 South State St., Syracuse, N. Y.

Syracuse Smelting Works (Metals and alloys), Brooklyn, N. Y.; Chicago, Ill.

Syracuse Stove Works (Warm air furnaces), Syracuse, N. Y.; 231 Water St., New York.

Syracuse Twist Drill Co. (Twist drills), Syracuse, N. Y.

Syracuse Wrench Co. (Wrenches), Syracuse, N. Y.

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Taber Pump Co. (Centrifugal pumps), 291-297 Elm St., Buffalo, N. Y.

Tabor Mfg. Co. (Foundry mach'y), 1740 Hamilton St., Philadelphia, Pa.

Tacony File & Hardware Co., Inc. (Files), Tacony, Philadelphia, Pa.

Taft-Peirce Mfg. Co., The (Mach'y), Woonsocket, R. I.

Tagliabue, C. J., Mfg. Co. (Pressure gauges and regulators), 18-38 33rd St., Brooklyn, N. Y.; Boston; Chicago; Pittsburgh; Tulsa; San Francisco.

Tagliabue, G., Estate of (Thermometers, etc.), 304 Pearl St., New York, N. Y.

Taintor Mfg. Co. (Saw sets), 113 Chambers St., New York City.

Talzb. Jacob & Son (Plumbers' tools), 2422 S. Adler St., Philadelphia, Pa.

Talc Products Co. (Talc and soapstone products), 120 Broadway, New York City.

Talcott, W. O. & M. W. (Belt fasteners), 91 Sabin St., Providence, R. I.

Tallamantic Co. (Belt dressing), North Tonawanda, N. Y.

Tally-Meter Co. (Revolution counters), 17 Elmwood Ave., Norwich, Conn.

Tanite Co. (Grinding equipment), Stroudsburg, Pa.

Tannewitz Works, The (Woodworking mach'y), Grand Rapids, Mich.

Taplin-Rice-Clerkin Co., The (Brick and tile mach'y), Akron, O.

Tate, Jones & Co., Inc. (Burners), Empire Bldg., Pittsburgh, Pa.; 50 Church St., New York; 505 Ellcott Sq., Buffalo; 511 Empire Bldg., Philadelphia; 530 Monadnock Bldg., Chicago; 309 Frisco Bldg., St. Louis; 16 California St., San Francisco.

Taunton-New Bedford Copper Co. (Soldering coppers), Taunton, New Bedford, Mass.; 61 Battery-march St., Boston; 35 Howard St., New York.

Taunton Rivet Works (Brass, copper and steel rivets), Taunton, Mass.

Taylor Belting Co. (Leather belting), 247 S. Meridian, Indianapolis, Ind.

Taylor, George, Brass & Bronze Works, Inc. (Shower baths, etc.), 22 Cherry St., New York, N. Y.

Taylor, Halsey W., Co. (Drinking fountains), Warren, O.; 823 Monadnock Bldg., San Francisco, Calif.; 343 S. Dearborn St., Chicago.

Taylor Instrument Co. (Thermometers, barometers, etc.), Rochester, N. Y.; 29 E. Madison St., Chicago; 141 Milk St., Boston.

Taylor, James L., Mfg. Co. (Woodworkers' clamps), Poughkeepsie, N. Y.; 82 Walker St., New York; 693 Mission St., San Francisco; First Nat'l Bank Bldg., Chicago.

Taylor Machine Co., The (Lathes), Cleveland, Ohio.

Taylor, N. & G., Co. (Solder roofing), Mariner & Merchant Bldg., Philadelphia, Pa.; 208 S. La Salle St., Chicago.

Taylor Portable Steel Derrick Co. (Steam traps), 213-221 W. Grand Ave., Chicago, Ill.

Taylor & Fenn Co. (Drilling machines), 54 Arch St., Hartford, Conn.

Taylor, Robert J., Inc. (Crucibles), 1900-1916 Callowhill St., Philadelphia, Pa.

Taylor, S. G., Chain Co. (Chain), 140 S. Dearborn St., Chicago, Ill.

Taylor-Shantz Co. (Sheet metal dies), Rochester, N. Y.; 149 Broadway, New York.

Taylor-Wilson Mfg. Co. (Tapping machines), McKees Rocks, Pa.

Taylor, W. P., Co. (Service boxes), 218 Ellcott Sq., Buffalo, N. Y.

Taylor-Wharton Iron & Steel Co. (Chain, conveyors, etc.), High Bridge, N. J.; 504 Newhouse Bldg., Salt Lake City.

Teetor, R. J. Co. (Molding machines), Muskegon, Mich.

Tegufilm Chemical Mfg. Co., Inc. (Boiler metal treatment), Syracuse, N. Y.; Richmond, Va.; 50 Church St., New York, N. Y.

Tegufilm Chemical Mfg. Co., Inc. (Metal treatment boiler), 112 Pearl St., Syracuse, N. Y.

Temco Electric Motor Co., The (Drills), Lelpaic, O., New York.

Tempeco Mfg. Co. (Brushes), 2277 Ogden Ave., Chicago.

Templeton, Kenly & Co., Ltd. (Railroad jacks), 1020 S. Central Ave., Chicago, Ill.; 131 Front St., West, Toronto; 2 Rector St., New York.

Templeton Mfg. Co., The (Steam traps), 115 Business St., Hyde Park, Mass.

Ten Eyck Pump Co. (Air pumps), Auburn, N. Y.

Tennant, G. H., Co. (Expansion joints), Minneapolis, Minn.

Terkelsen Machine Co. (Lathe chucks), 326 A. St., Boston, Mass.

Termaut & Monahan Mfg. Co. (Engines), Oshkosh, Wis.; New York; Chicago; Philadelphia; Cincinnati; Minneapolis.

Terrill's Equipment Co. (Metal lockers), Grand Rapids, Mich.

Terry, Edward F., Mfg. Co. (Derricks), Grand Central Terminal, New York, N. Y.

Terry Steam Turbine Co., The (Steam turbines), Terry Square, Hartford, Conn.; Philadelphia, Chicago, New York.

Tessmer Machine & Tool Co. (Combination tools), 1427 Rivard, Detroit, Mich.

Test, Frank B. (Asbestos burners), 1505 Adams St., Toledo, O.

Texas Co., The (Lubricating oils), 17 Battery Pl., New York, N. Y.; Boston; Dallas; Birmingham; Norfolk; Philadelphia; Chicago; Youngstown; El Paso; Oklahoma City; St. Louis; Denver; Atlanta; New Orleans; Houston, Tex.

Texas Mfg. Co. (Cylinders and valves), 255 W. 15th St., Ft. Worth, Tex.

Test, Frank B. (Burners), 1505 Adams St., Toledo, O.

Thacher Propeller & Foundry Corp. (Fuel economizer), Albany, N. Y.

Thatcher Furnace Co. (Warm air furnaces), 133-135 W. 35th St., New York, N. Y.; 341 N. Clark St., Chicago, Ill.

Theanoll Mfg. Co. (Belt dressing), 2744 N. 24th St., Philadelphia, Pa.

Thelen Brothers (Baling presses), Syracuse, N. Y.

Thermal Appliance Co., Inc. (Water heaters), 125 East 46th St., New York, N. Y.

Thermalene Co. (Welding outfits), Chicago Heights, Illinois.

Thermo Electric Instrument Co. (Electric ovens, etc.), 8 Johnson St., Newark, N. J.

Thermoid Rubber Co. (Mechanical rubber goods), Trenton, N. J.; New York, Atlanta, Boston, Cleveland, Detroit, Los Angeles.

Thew Shovel Co., The (Shovels, steam), Lorain, O.

Thomas, Arthur H., Co. (Water stills), W. Washington Sq., Philadelphia, Pa.

Thomas Co., The (Boiler compound), 33 Banks St., Philadelphia, Pa.

Thomas Elevator Co. (Electric hoists), 20 S. Hoyne Ave., Chicago, Ill.; Park Row Bldg., New York.

Thomas Grate Bar Co. (Boiler grates), Birmingham, Ala.; Hippodrome Bldg., Cleveland; Railway Ex. Bldg., Chicago; 2 Rector St., New York; 315 Board of Trade Bldg., New Orleans, La.

Thomas Mfg. Co. (Tools), 3110 East St., Dayton, O.

Thomas, Roberts, Stevenson Co. (Warm air furnaces), American and Dauphin Sts., Philadelphia, Pa.

Thomas, Seth, Clock Co. (Clocks), 19 W. 44th St., New York; 215 W. Randolph St., Chicago, Ill.

Thomas Spacing Machine Co. (Punches), Pittsburgh, Pa.

Thomas & Armstrong Co. (Radiator shields), U. B. Bldg., Dayton, O.

Thompson Bros. (Shaft couplings), 520 Buttonwood St., Philadelphia, Pa.

Thompson Grinder Co., The (Grinding machines), Cor. W. Main & Zischler Sts., Springfield, O.

Thompson-Hayes Co., The (Boiler compounds), general sales agents, 972-74 Rockefeller Bldg., Cleveland, O.

Thompson Heater Corp. (Heating boilers), 37 Church St., Buffalo, N. Y.

Thompson, The Henry G. & Son Co., (Saws), 277 Chapel St., New Haven, Conn.

Thompson Iron Works, The (Tanks and boilers), 1825-27 Callowhill St., Philadelphia, Pa.

Thompson Mfg. Co. (Lawn sprinklers), 8th St. and Santa Fe Ave., Los Angeles, Cal.

- Thompson Mfg. Co. (Vacuum pumps), Des Moines, Iowa.
- Thompson, Richard, & Co. (Steam specialties), 126 Liberty St., New York, N. Y.
- Thompson Spot Welder Co. (Welders), Lynn, Mass.; 4100 Langland St., Cincinnati, O.; 817 W. Wash. St., Chicago, Ill.; 126 State St., Boston, Mass.; 421 Widener Bldg., Philadelphia, Pa.; 311 Falls St., Niagara Falls, N. Y.; 30 W. 42d St., New York, N. Y.; 3 Wood St., Pittsburgh, Pa.
- Thomson, J. M., & Co., Inc. (Boiler compounds), 521-523 Broome St., New York, N. Y.
- Thomson Meter Co. (Water meters), 100-110 Bridge St., Brooklyn, N. Y.
- Thomson Spot Welder Co. (Welders), 161 Pleasant St., Lynn, Mass.
- Thomson Wood Finishing Co., The (Paints), 829-35 N. 3d St., 115 N. 4th St., Philadelphia, Pa.
- Thread-Tight Co. (Pipe cement), 288 Bowery, New York, N. Y.
- Three-In-One Oil Co. (Lubricating oil), 165 Broadway, New York, N. Y.; 444 Market St., San Francisco, Cal.
- Thrush, H. A., & Co. (Heating specialties), Peru, Ind.
- Thurman, J. S. Vacuum Cotton Picking Machinery Co. (Cotton picking machines), St. Louis, Mo.
- Thurston Mfg. Co. (Die filing machines), 140 Benedict St., Providence, R. I.
- Thwing Instrument Co. (Pyrometers), 3339 Lancaster Ave., Philadelphia, Pa.; 59 Pearl St., New York; 227 Davenport Road, Toronto; 816 Ivy St., Pittsburgh, Pa.; 505 New Call Bldg., San Francisco, Cal.; 716 S. Hill St., Los Angeles, Calif.
- Tidey Heat Specialties Co. (Furnace clocks), 1107 Broadway, New York.
- Tidey, Marcus B. (Woodworking mach'y), Newark, N. J.
- Tidey, Wesley (Woodworking mach'y), Newark, N. J.
- Tierney, J. P. (Rope fire escapes), 269 S. 4th St., Philadelphia, Pa.
- Tilghman-Brooksbank Sand Blast Co. (Sand blast machines and equipment), 1118 S. 11th St., Philadelphia, Pa.
- Tillery's Little Janitor Clock Co. (Furnace clocks), 164 Main St., Newark, N. J.
- Tillinghast, L. H., Supply Co., The (Lead pipe and sheet lead), 162-168 Dorrance St., Providence, R. I.
- Tillotson Humidifier Co. (Humidifiers, heating system), Providence, R. I.
- Tioga Steel & Iron Co. (Drop forgings), 52nd and Grays Ave., Philadelphia, Pa.
- Timken Roller Bearing Co. (Roller bearings), Dueber Ave. and 20th St., S. W., Canton, O.
- Timmis & Clissold (Machines), Round Brook, N. J.
- Tindell-Morris Co. (Cutters), Eddystone, Pa.
- Tingue, Brown & Co. (Felt washers, wheels), 118 E. 25th St., New York, N. Y.; 1227 Wabash Ave., Chicago, Ill.; 765 Mission St., San Francisco.
- Tinker, F., & Sons Co. (Knives & tools), 5687-97 Butler St., Pittsburgh, Pa.
- Tinsman, M. L., & Co., Inc. (Structural slate), Pen Argyl, Pa.
- Tip-It, Inc. (Welding compound), 120 Broadway, New York, N. Y.
- Tippett & Wood (Steel towers, tanks, etc.), Phillipsburg, N. J.; 135 William St., New York; 320 Commercial Trust Bldg., Philadelphia.
- Tips Foundry & Machine Co. (Gas engines), Austin, Texas.
- Tirrill Gas Machine Lighting Co. (Gas lighting equipment), 103 Park Ave., New York, N. Y.
- Titan Automatic Tool Co. (Pneumatic tools), 25 West Broadway, New York, N. Y.
- Titeflex Metal Hose Corp. (Hose and tubing), Badger Ave. and Runyon St., Newark, N. J.
- Titusville Iron Works Co., The (Steel tanks), Titusville, Pa.; New York, Pittsburgh, Chicago, Cleveland, Detroit, Washington, Buffalo.
- Toefer, Wm., & Sons Co. (Perforated metals), 80 Menominee St., Milwaukee, Wis.
- Tokheim Oil Tank & Pump Co., Fort Wayne, Ind.; 189 W. Madison St., Chicago; 6 Reade St., New York; 309 W. Pico, Los Angeles; 2216 Farnham St., Omaha; 1020 Hennepin St., Minneapolis; 3206 Locust St., St. Louis.
- Toledo Coldmaker Co. (Refrigerating machinery), Toledo, O.
- Toledo Crane Co., The (Cranes), Bucyrus, O.
- Toledo Foundry & Machine Co. (Steam shovels), 202-20 Cherry St., Toledo, O.
- Toledo Machine & Tool Co., The (Power presses), Toledo, O.; 549 W. Wash. St., Chicago.
- Toledo Metal Furniture Co. (Factory stools), Dorr St. and N. Y. C. Ry., Toledo, O.
- Toledo Metal Mfg. Co., The (Steel tanks), Toledo, O.
- Toledo Pipe Threading Machine Co., The (Pipe threaders and cutters), 1445 Summit St., Toledo, O.; 50 Church St., New York, N. Y.  
(See Index to advertisements, pages 7, 8 and 9.)
- Toledo Sanitary Wiper Co. (Machine wipers), Toledo, Ohio.
- Toledo Saw & Supply Co. (Saws), Washington and St. Clair Sts., Toledo, O.
- Toledo Scale Co. (Scales), Toledo, O.; Boston, New York, Philadelphia, Pittsburgh, Buffalo, Cincinnati, Atlanta, Chicago, Kansas City, Detroit, Minneapolis, San Francisco.
- Toledo Ship Building Co. (Boilers), 2339 Front St., Toledo, O.
- Toledo Steel Tube Co., (Steel tubing), Toledo, O.
- Toledo Washer & Stamping Co., The (Pipe hangers), 216 Lafayette St., Toledo, O.
- Toledo Wheelbarrow Co., The (Wheelbarrows), N. W. cor. Broadway & Wabash Crossing, Toledo, O.; 337 River St., Chicago, Ill.
- Toles, W. C., Co. (Quick action vises), 4118 N. Kedvale Ave., Chicago, Ill.
- Tolhurst Machine Works (Centrifugal machines), Fulton St. and 6th Ave., Troy, N. Y.; 111 Broadway, New York; 8 So. Dearborn St., Chicago; Merchants Exchange Bldg., San Francisco; Charlotte, N. C.; Hamilton, Ont.
- Tolman Mfg. Co. (Brooms and brushes), Milwaukee, Wis.
- Toombs Mfg. Co. (Water heaters), Geneva, Ill.
- Topping Bros. (Jacks, drills, etc.), 122 Chambers St., New York, N. Y.
- Torchwelt Equipment Co. (Welding and cutting apparatus), 224 N. Carpenter St., Chicago, Ill.; Pittsburgh, Pa.; Detroit; New York.
- Toronto Foundry & Machine Co., Inc. (Heavy machinery), Toronto, Ohio.
- Torrey Roller Bushing Works (Bushings), Bath, Me.
- Torrington Mfg. Co., The (Swaging machines), Torrington, Conn.
- Torsion Nut-Lock & Washer Co. (Nut Locks & Washers), 11 Central St., Boston, Mass.
- Tower Mfg. Co. (Nails, staples, brads, etc.), Madison, Ind.
- Townsend Furnace & Machine Shop Co. (Power transmission mach'y), Albany, N. Y.
- Townsend, H. P. Mfg. Co. (Riveters), Hartford, Conn.
- Towsley, John T., Mfg. Co. (Wood working machines), 1036 Woodrow St., Cincinnati, Ohio.
- Tracey, C. H., Co. (Angle plates), 161 Sumner St., Boston, Mass.
- Trageser, John, Steam Copper Works (Copper tanks, sinks, etc.), 447-457 26th St., New York, N. Y.
- Tragle Mfg. Co., Inc. (Files and rasps), 342 N. 6th St., Reading, Pa.
- Trane Co., The (Vacuum heating systems), 127 S. 6th St., La Crosse, Wis.; 327 S. La Salle St., Chicago.
- Transmission Ball Bearing Co. (Ball bearings and trucks), 1050 Military Rd., Buffalo, N. Y.; 173 Lafayette St., New York; 3105 N. 15th St., Philadelphia; 549 W. Washington Boul., Chicago.
- Tranter Mfg. Co. (Power plant specialties), 105 Water St., Pittsburgh, Pa.
- Travis, G. E. (Shaking and dumping grates), Henry, Ill.
- Traylor Engineering & Mfg. Co. (Ammunition mach'y), Allentown, Pa.; 30 Church St., New York; 1414 Fisher Bldg., Chicago, Ill.; 211 Fulton Bldg., Pittsburgh; 900 Citizens Bank Bldg., Los Angeles, Calif.; Mohawk Block, Spokane, Wash.
- Treadwell, M. H., Co. (Grates), 140 Cedar St., New York, N. Y.; 208 S. La Salle St., Chicago.
- Treadwell Engineering Co. (Pipe threading machines), 92 West St., New York, N. Y.; Easton, Pa.
- Treaty Co., The (Plumbing specialties), Greenville, Ohio.
- Tremont Nail Co. (Nails), Albany Bldg., Boston, Mass.
- Trenjer Specialty Co. (Drinking fountains), Trenton, N. J.
- Trenton Brass & Machine Co., The (Plumbing brass goods), Prospect & Dale Sts., Trenton, N. J.
- Trenton Malleable Iron Co., The (Boiler flue nipples), Trenton, N. J.
- Trenton Potteries Co., The (Porcelain plumbing ware), Trenton, N. J.; 9 Tremont Pl., Boston; Monadnock Bldg., San Francisco; 15 E. 42nd St., New York.
- Trethaway Bros. (Engineers' oilers), Parsons, Pa.
- Trevor Mfg. Co. (Shingle mach'y, etc.), Lockport, N. Y.
- Triangle Sales Co. (Coal gas carbureters), 2921 Ridge Ave., Philadelphia, Pa.
- Trico Fuse Mfg. Co. (Electric fuses), Milwaukee, Wis.
- Trill Indicator Co. (Engine indicators), Pine St., Corry, Pa.
- Trimont Mfg. Co. (Pipe wrenches), 55-71 Amory St., Roxbury, Mass.
- Trimount Rotary Power Co. (Rotary pumps), Whiting Ave., Boston, Mass.; E. Dedham, Mass.
- Tri-State Engineering Co. (Steam engines), Zanesville, O.
- Triumph Electric Co., The (Ice machinery), Oakley, Cincinnati, O.; 601 Juanita Bldg., Dallas; 1925 Grand Ave., Kansas City, Mo.; 643 Tchoupitoulas St., New Orleans.
- Triumph Ice Machine Co. (Ice machines), Oakley, Cincinnati, O.



- Triumph Mfg. Co. (Bakers' mach'y), Columbus Ave., near N. Greenmount Ave., Cincinnati, O.  
 Triumph Valve Mfg. Co. (Valves), Mansfield, O.  
 Trogan Brass Mfg. Co., The (Plumbers' brass goods), Cincinnati, O.  
 Trojan Electric Steel Co. (Electric steel), 3401 S. Hoyne Ave., Chicago, Ill.  
 Trolley Supply Co. (Lamps, radiators and gas logs), Gas Supply Dept., Massillon, O.  
 Tropenas Co. (Converters), 2243 Nostrand Ave., Brooklyn, N. Y.  
 Tropical Paint & Oil Co., The (Lubricants), 1252 W. 70th St., Cleveland, O.  
 Troop Mfg. Co. (Water heaters), 218 1st Ave., Pittsburgh, Pa.  
 Troy Engine & Machine Co. (Steam engines), Troy, Pa.  
 Troy File Works (Tool handles), Troy, N. Y.  
 ♦ Trumbull Steel Co., The (Roofing, shingles, etc.), Warren, O.  
 Trump Bros. Machine Co. (Center grinders, chucks, etc.), Wilmington, Del.  
 Trump Mfg. Co. (Steam turbines), Springfield, O.  
 Truscon Laboratories, The (Material water proofing), Truscon Bldg., Detroit, Mich.  
 Truscon Steel Co. (Metal building material), Youngstown, O.  
 Try-Me Mfg. Co. (Ball cocks), Westfield, Mass.  
 ♦ Tubular Rivet & Stud Co. (Brass and copper rivets), 87 Lincoln St., Boston, Mass.  
 Tuck Mfg. Co. (Cold chisels), Brockton, Mass.; 229 W. Randolph St., Chicago; 845 Monadnock Bldg., San Francisco.  
 Tucker Tool & Machine Co. (Caulking tools), 75 Murray St., New York, N. Y.  
 Tucker, W. W. & C. T. (Grease cups, etc.), 191 Franklin Ave., Hartford, Conn.  
 Tucker & Dorsey Mfg. Co. (Factory trucks), Indianapolis, Ind.  
 Tudor Boiler Mfg. Co., The (Tubular boilers), 715 E. 3d St., Cincinnati, O.  
 Tufts, Nathaniel, Meter Co. (Gas meters), 455 Commercial, Boston, Mass.  
 Turbine Sewer Machine Co. (Sewer cleaners), 197 11th St., Milwaukee, Wis.  
 Turner Brass Works, The (Plumbers' furnaces, etc.), Sycamore, Ill.  
 Turner & Deegan (Bit braces), Bristol, Conn.  
 Turner-Fricke Mfg. Co. (Gas engines), Farmers Bank Bldg., Pittsburgh, Pa.  
 Turner Heating Co. (Damper regulators), 137 Dyer St., Providence, R. I.  
 Turner, J. S., Mfg. Co. (Leather belting), 133 Middle St., Lowell, Mass.  
 Turner Lead Co. (Lead pipe), 1534 St. Clair Ave., East St. Louis, Ill.  
 Turner Machine Co. (Turret machines), Danbury, Conn.  
 Turner Mfg. Co. (Gas engines), Port Washington, Wis.  
 Turner Oil Filter Co. (Oil filters), Niles, Mich.  
 Turner Tanning Machine Co. (Tanning mach'y), Peabody, Mass.  
 Turner & Seymour Mfg. Co., The (Plumbers' chain), Torrington, Conn.  
 Tuttle & Bailey Mfg. Co. (Warm air registers), 2 West 45th St., New York, N. Y.; 1123 W. 37th St., Chicago; 50-52 Union St., Boston, Mass.  
 20th Century Brass Works (Bushings and bearings), 516-18 Fifth Ave. So., Minneapolis, Minn.  
 Twentieth Century Brass Works (Cocks), Belleville, Ill.  
 XXth Century Heating & Ventilating Co. (Boilers and furnaces), Akron, O.  
 Twin City Co., Selling Products of Minneapolis Steel & Machinery Co. (Steam and gas engines, power transmission machinery, etc.), 2854 Minnehaha Ave., Minneapolis; Denver; Des Moines; Fargo; Kansas City; Lincoln; New York; Peoria; St. Louis; Wichita, Kan.; Great Falls; Indianapolis; Spokane; Salt Lake City.  
 20th Century Mfg. Co. (Traction engines), Somerset Co., Boynton, Pa.  
 Twin Fire Furnace Co. (Grates and furnaces), 1252 1st Natl. Bank Bldg., Chicago, Ill.  
 Twin Water Heater Co. (Water heaters), Robinson, Ill.  
 Twinvolute Pump & Mfg. Co. (Turbine pumps), 216-228 High St., Newark, N. J.; 1633 Monadnock Bldg., Chicago; 55 William St., New York.  
 Twisted Wire & Steel Co. (Pipe hangers), 5832 S. Green St., Chicago.  
 Tyler, W. S., Co. (Wire screens), 3615 Superior Ave., Cleveland, O.; 68 Devonshire St., Boston; 337 S. Mich. Ave., Chicago; 200 Fifth Ave., New York.  
 Tyler, Frederick A. (Heating specialties), Albany, N. Y.  
 Tyler Mfg. Co. (Brazing torches), 64 Pearl St., Boston, Mass.  
 Tyler Tube & Pipe Co. (Boiler tubes), Washington, Pa.  
 Tyler Underground Heating Systems (Expansion joints), 855-857 Progress St., N. S., Pittsburgh, Pa.  
 Typhoon Fan Co. (Ventilating fans), 345 W. 39th St., New York, N. Y.; 1728 S. Arlington, Los Angeles, Calif.; 1044 Camp St., New Orleans; 64 W. Randolph St., Chicago; 255 No. 13th St., Philadelphia; Raleigh, N. C.  
 Ty-Sa-Man Machine Co. (Flour mill mach'y), Knoxville, Tenn.
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- Uehling Instrument Co., The (Industrial instruments), 71 Broadway, New York; Boston, Detroit, Philadelphia, 20 W. Jackson Blvd., Chicago.  
 Ulmer Leather Co. (Leather belting), Norwich, Conn.  
 Under-Feed Stoker Co. of America, The (Stokers), Book Bldg., Detroit, Mich. Branch offices: 667 Hancock Bldg., Boston; 590 Ellicott Square, Buffalo; 1100 Realty Bldg., Charlotte; 523 Harris Trust Bldg., Chicago; 926-927 Union Central Bldg., Cincinnati; 604 Swetland Bldg., Cleveland; C. H. Thomas, 1123 First National Bank Bldg., Denver; Commerce Trust Bldg., Kansas City; 637 Plymouth Bldg., Minneapolis; Leo S. Well, New Orleans; 930 Bowling Green Bldg., 11 Broadway, New York; E. H. Hunter & Co., Osaka, Japan; 1523 Land Title Bldg., Philadelphia; 1212 Park Bldg., Pittsburgh; J. G. Midgley, 503 Dooley Block, Salt Lake City; L. C. Smith Bldg., Seattle; 1704 Boatmen's Bank Bldg., St. Louis; 37-41 Britain St., Toronto.  
 Underwood, H. B., & Co. (Key sewing machines), 1027 Hamilton St., Philadelphia, Pa.  
 Union Asbestos & Rubber Co. (Asbestos goods), 169 Quincy St., Chicago, Ill. (See index for advertisement, pages 7, 8 and 9.)  
 ♦ Union Belt Co. (Leather belting), 66 Troy St., Fall River, Mass.; Boston; New Bedford; Providence; Dayton; Toledo.  
 Union Boiler & Mfg. Co. (Steel tanks, boilers, etc.), 4th St. and P. & R. Ry. Co., Lebanon, Pa.  
 Union Brass Mfg. Co. (Plumbers' brass goods), 224 High Ave., Cleveland, O.  
 Union Brass & Metal Mfg. Co. (Plumbing brass goods), Lawson and McCubbin Sts., St. Paul, Minn.; Sheldon Bldg., San Francisco; 501 Fifth Ave., New York.  
 Union Cabinet Co. (Tool chests), 621 St. Paul St., Rochester, N. Y.  
 Union Carbide Co. (Carbide), 42nd St. Bldg., New York.  
 Union Chain Mfg. Co., The (Sprocket chain), Seville, Ohio; Chicago, Buffalo, Pittsburgh.  
 ♦ Union Drawn Steel Co. (Shafting), Beaver Falls, Pa.  
 Union Drop Forge Co. (Threading dies), 358 W. Grand Ave., Chicago, Ill.  
 Union Fibre Co., Inc. (Mineral wool), 103 Union St., Winona, Minn.; 714 Division Ave.; Niagara Falls, N. Y.; Room 304, Dexter Bldg., Boston, Mass.; 808 Perdido St., New Orleans, La.; Candler Annex, 104 N. Pryor, Atlanta, Ga.; 709 Union Bldg., Cleveland, O.; 2818 Cottage Grove, Des Moines, Iowa; Box 942, Orlando, Fla.; Suite 625, Lafayette Bldg., Philadelphia, Pa.; Room 308, 51 E. 42d St., New York, N. Y.; 1039 Syndicate Trust Bldg., St. Louis, Mo.; 706 Fisher Bldg., Chicago, Ill.; 385 Shubert Bldg., St. Paul, Minn.; 922 Stahlmann Bldg., Nashville, Tenn.; c/o Coates House, Kansas City, Mo.  
 Union Foundry Co. (Soil pipe), Anniston, Ala.  
 Union Furnaces Mfg. Co. (Shovels and scoops), Union Furnace, Pa.  
 Union Gas Engine Co. (Gas engines), Oakland; San Pedro, Cal.; 24 California St., San Francisco.  
 Union Hardware Co. (Hand tools), Union, S. C.  
 Union Hardware Co. (Carpenter's tools) Torrington, Conn., 99 Chambers St., New York.  
 Union Iron Works Co., The (Engines, boilers, cars, etc.), Selma, Ala.  
 Union Iron Works (Elevator mach'y), 21 Oak St., Decatur, Ill.  
 Union Iron Works (Power boilers, etc.), Erie, Pa.  
 Union Iron Works (Pile drivers, etc.), Hoboken, N. J.  
 Union Lathe Works, The (Lathes), York, Pa.  
 Union Machine Works (Drainage fittings), 3rd and Franklin Sts., Oakland, Cal.  
 ♦ Union Mfg. Co. (Chucks), New Britain, Conn.; 26 Cortlandt St., New York, N. Y.  
 Union Metal Works (Plumbing brass goods), 80 Carter St., Chelsea, Mass.  
 Union Oil Works (Lubricating oils), Erie, Pa.  
 Union Porcelain Works, Inc. (China handles, etc.), 300 Eckford, Brooklyn, N. Y.  
 Union Radiator Co. (Boiler and radiators), 192 E. 32d St., Brooklyn; 34 S. 17th St., Philadelphia.  
 Union Rubber & Asbestos Co. (Belting and packing), Trenton, N. J.  
 (See Index to advertisements, pages 7, 8 and 9.)  
 Union Sanitary Works (Enamel baths, sinks, etc.), Noblesville, Ind.  
 Union Sanitary Supply (Rubber tank balls), Union City, Ind.  
 Union Smelting & Refining Co. (Metals), St. Charles St. and Ave. L, Newark, N. J.; Baltimore; Detroit; Chicago; New York; Cleveland.  
 Union Soapstone Co. (Sinks and laundry trays), 14 Marshall St., Boston, Mass.  
 Union Steam Pump Co. (Steam pumps), Battle Creek, Mich.  
 Union Thermometer Co., Inc. (Thermometers), 1301 Boston Rd., New York, N. Y.

- Union Tool Co. (Oil well tools), Torrance, Cal.; Carnegie, Pa.; West Chicago, Ill.
- Union Tool Chest Co., Inc. (Tool chests), 27 Mill St., Rochester, N. Y.; 1116 State & Lake Bldg., Chicago; 26 Cortland St., New York; 320 Market St., San Francisco.
- Union Tool Co. (Machinists' tools), Orange, Mass.; 74 Murray St., New York; 34 N. Clinton St., Chicago.
- ◆ Union Twist Drill Co., The (Cutters and drills), Athol, Mass.
- Union Water Meter Co. (Water meters and valves), 33 Hermon St., Worcester, Mass.; 539 Real Estate Trust Bldg., Philadelphia.
- United Alloy Steel Corp. (Alloy steels), Canton, O.
- United American Metals Corp. (Babbitt metals), Diamond St. and Meserole Ave., Brooklyn, N. Y.; 443 S. Dearborn St., Chicago; 1011 Chestnut St., Philadelphia.
- United Brass & Aluminum Mfg. Co. (Heaters), Port Huron, Mich.
- United Brass Mfg. Co. (Plumbing brass goods), 3844 Hamilton Ave., N. E., Cleveland, O.
- United Cement Products Co. (Septic tanks), 186 Vermont St., Indianapolis, Ind.
- United Conveyor Corp. (Ash handling systems), Old Colony Bldg., Chicago.
- United Electric Co., The (Vacuum cleaners), 45 Hurford St., Canton, O.; New York; Cleveland; Chicago.
- United Engine Co. (Gasoline engines), Lansing, Mich.
- United Engineering & Foundry Co. (Power presses), Farmers Bank Bldg., Pittsburgh, Pa.
- ◆ United & Globe Rubber Co. (Mechanical rubber goods), Globe and Prospect St., Trenton, N. J.; New York, Philadelphia, Washington, D. C.; New Orleans, Houston, Salt Lake City, Pittsburgh, Indianapolis, Chicago, Denver, San Francisco, Seattle.
- (See index to advertisement, pages 7, 8 and 9.)
- United Hammer Co. (Power hammers), Oliver Bldg., Boston, Mass.
- United Injector Co. (Injectors), 119 W. 40th St., New York City; Chicago, Boston.
- United Iron Works (Mach'y), Ridge Arcade Bldg., 402 Andrews Bldg., Dallas, Texas.
- United Iron Works (Pumps and mach'y), Oakland, Cal.
- United Lead Co. (Lead pipe, sheets, paints, etc.), 111 Broadway, New York, N. Y.; E. W. Blatchford Co., Chicago; Gibson & Price Co., Cleveland; Lausten Lead Works, Chicago; Le Roy Shot & Lead Works, New York; Northwestern Shot & Lead Works, St. Paul; Omaha Shot & Lead Works, Omaha; Jas. Robertson Lead Co., Baltimore; Sportsman's Shot Works, Cincinnati; Tatham Bros., New York; Tatham Bros., Philadelphia; Union Lead & Oil Works, Brooklyn.
- United Lead Co. (Lead traps), Court and Harris Sts., Cincinnati, O.
- United Lined Tube & Valve Co. (Lead lined pipe), 182 Franklin St., Boston, Mass.
- United Machine & Mfg. Co. (Machinery), Canton, O.; Detroit, Mich.; Cleveland, O.
- United Mat Mfg. Co. (Mats), Roselle Park, N. J.
- United Mfg. Co. (Fire extinguishers), Toledo, O.
- United Metal Hose Co., Inc. (Metallic hose), 532 West 22nd St., New York, N. Y.
- United Refrigeration Co. (Refrigerating mach'y), 3407 W. 66th Pl., Chicago, Ill.
- United Seal Co. (Meter seals), Columbus, O.
- United Smelting & Aluminum Co. (Aluminum), New Haven, Conn.; Detroit, Chicago, New York.
- United States Air Compressor Co. (Air compressors), 6528 Carnegie Ave., Cleveland, Ohio.
- United States Asbestos Co. (Asbestos goods), Mannheim, Pa.; 131 Liberty St., New York; 116 Broad St., Boston, Mass.
- United States Asbestos Co. (Packings), 619 Wash. Blvd., Chicago, Ill.
- U. S. Ball Bearing Co. (Ball bearings), 4555 Palmer Ave., Chicago, Ill.
- U. S. Blow Pipe & Dust Collecting Co. (Dust collectors), 216-218 N. Washtenaw Ave., Chicago, Ill.
- United States Boiler Compound Co. (Boiler compound), 157 W. Randolph St., Chicago.
- United States Cast Iron Pipe & Foundry Co. (Pipe and fittings), Burlington, N. J.; Philadelphia; Pittsburgh; Chicago; San Francisco; St. Louis; New York; Birmingham, Ala.; Cleveland, Minneapolis, Cincinnati, Dallas, Buffalo.
- United States Chain & Forging Co. (Chains), Union Arcade Bldg., Pittsburgh, Pa.
- United States Drill Head Co. (Drill heads), Cincinnati, O.
- U. S. Electrical Mfg. Co. (Electric grinders, etc.), 300 S. Central Ave., Los Angeles, Cal.
- ◆ United States Electrical Tool Co., The (Electrical tools), 6th and Mt. Hope Sts., Cincinnati, O.; New York; Boston; Chicago; St. Louis; Detroit; Philadelphia; Kansas City; Houston; Cleveland; Milwaukee; Pittsburgh.
- United States Equipment Co. (Hoisting engines), 208 S. La Salle St., Chicago, Ill.
- United States Expansion Bolt Co. (Expansion bolts), 139-41 Franklin St., New York, N. Y.; Chicago; San Francisco; Columbia, Pa.
- United States Ferro Alloys Corp. (Metals), 30 E. 42nd St., New York; Niagara Falls, N. Y.
- U. S. Flexible Metallic Tubing Co. (Metallic hose), 336 S. San Pedro St., Los Angeles, Cal.; San Francisco, Houston, Seattle.
- U. S. Gas Machine & Pattern Co. (Gas machines, blowers, etc.), 9th St. and Clay Ave., Muskegon, Mich.
- United States Gauge Co. (Pressure gauges, etc.), 44 Beaver St., New York; Chicago; San Francisco; Detroit; Philadelphia; Boston; New Orleans; Birmingham; Montreal.
- United States Graphite Co., The (Lubricants), 1430 Holland av., Saginaw, Mich.; 30 Church St., New York City; 1822 Land Title Bldg., Philadelphia; 1229 Fulton Bldg., Pittsburgh; 1328 Candler Bldg., Atlanta; 630 Railway Exchange, Chicago; 850 Leader-News Bldg., Cleveland; 1017 Dime Bank Bldg., Detroit; 606 Gas & Electric Bldg., Denver; 669 Phelan Bldg., San Francisco; 1306 First Nat'l Bank Bldg., Cincinnati; 26 Upton St., Boston.
- United States Gutta Percha Paint Co. (Paints and cements), 12-30 Dudley St., Providence, R. I.
- U. S. Heating & Plumbing Co. (Heating boilers), 744 W. Court St., Cincinnati, O.
- U. S. High Speed Steel & Tool Corp. (Cutters and drills), 489 Fifth Ave., New York.
- United States Incinerator Contracting Co. (Incinerators), 101 Park Ave., New York, N. Y.
- U. S. Indestructible Gasket Co. (Gaskets), 60 Church St., New York, N. Y.
- U. S. Lock Nut Corp. (Locknuts), 400 N. Mich. Ave., Chicago.
- United States Machine Co. (Woodworking mach'y), 720 West 3rd St., Williamsport, Pa.
- United States Machine Tool Co. (Milling machines), Cincinnati, O.
- U. S. Metallic Packing Co., The (Steam packings), 429 N. 13th St., Philadelphia, Pa.; 454 Railway Exchange, Chicago.
- United States Mineral Wool Co. (Mineral wool, gaskets), 280 Madison Ave., New York, N. Y.
- U. S. Molding Machine Co., The (Molding machines), Cleveland, O.
- United States Ozone Co. (Ozonators), Scottsdale, Pa.
- U. S. Reduction Co. (Metals), East Chicago, Ind.; Chicago, Pittsburgh.
- U. S. Radiator Corp. (Heating equipment), Broadway and East River, Detroit, Mich.; 5-7 29th St., New York; 203 Railway Exchange, Chicago; 901 Washington Ave., S., Minneapolis; 8d Ave. and Wood St., Pittsburgh; 236 Congress St., Boston; Land Title Bldg., Philadelphia; 1515 Commercial Bldg., St. Louis; 709 N. Howard St., Baltimore; 220 E. 10th St., Kansas City; 916 Farnham St., Paola, Kan.; Schofield Bldg., Cleveland.
- U. S. Reduction Co. (Babbitt metal), East Chicago, Ind.; 110 S. Dearborn St., Chicago.
- United States Rubber Co., Eureka Fire Hose Dept. (Hose), 27 Barclay St., New York.
- U. S. Sand Paper Co. (Sand paper), Williamsport, Pa.; New York; Philadelphia; Detroit; Chicago; San Francisco; Gloucester, Mass.
- U. S. Sherardizing Co. (Floor flanges), New Castle, Pa.
- United States Rocking Grate Bar Co. (Grates), 2825 W. Harrison St., Chicago, Ill.
- United States Safety Gas Machine Co. (Gas generators), Belleville, Ill.
- ◆ United States Rubber Company, Mechanical Goods Division, 1790 Broadway, New York, N. Y. Branch offices or stores in all principal cities.
- United States Sanitary Mfg. Co. (Baths, sinks, etc.), Arrott Bldg., Pittsburgh, Pa.; Chicago, New York, Philadelphia.
- United States Standard Co. (Gas generators), Voorheesville, N. Y.
- United States Smelting Furnace Co., The (Smelting furnaces), Belleville, Ill.
- U. S. Wind Engine & Pump Co. (Windmills, pumps), 25 Water St., Batavia, Ill.
- U. S. & Cuban Allied Works Engr. Corp. (Gas engines), Bradford, Pa.
- United Stokers Co. (Stokers), Hammond, Ind.
- United Steel & Wire Co. (Hose clamps), Battle Creek, Mich.
- United Wire & Supply Co. (Brass tubing, silver solder), 1497 Elmwood Ave., Providence, R. I.
- United Zinc Smelting Corp. (Zinc), Woolworth Bldg., New York, N. Y.
- Unitex Co. (Grinding wheels), 3229 Sheffield Ave., Chicago, Ill.
- Unity Mfg. Co., The (Tools and washers), 4229 Lorain Ave., Cleveland, O.
- Universal Boring Machine Co. (Boring machines), Hudson, Mass.
- Universal Caster & Foundry Co. (Casters), 574-600 Ferry St., Newark, N. J.
- Universal Distributing Co., Inc. (Cork specialties for plumbers), 1005 Dime Bank Bldg., Detroit, Mich.
- Universal Drafting Machine Co. (Drafting machines), Cleveland, O.; 4002, 1 Madison Ave., New York.

- Universal Drum Trap & Cover Co.** (Drum trap covers), 753 E. 39th St., Chicago, Ill.  
**Universal Equalizer Co.** The (Vise jaws), 132 Opera Place, Cincinnati, O.  
**Universal Fluxine Co.** (Brassing compounds), Urbana, Ohio.  
**Universal Gasket & Mfg. Co.** (Gaskets), 2901 S. Cicero Ave., Chicago.  
**Universal Grinding Machine Co.** (Grinding machines), Fitchburg, Mass.  
**Universal Heater Mfg. Co.** (Heaters), 1000-02 North Vandeventer Ave., St. Louis, Mo.  
**Universal Hoist & Mfg. Co.** (Hoists), Cedar Falls, Ia.  
**Universal Industrial Corp.** (Hose clamps), Hackensack, N. J.  
**Universal Machine Co.** (Bolt cutters), Bowling Green, Ohio.  
**Universal Machine Works** (Metal cutting shears), Knoxville, Tenn.  
**Universal Machinery Co.** (Lathes), 764 30th St., Milwaukee, Wis.  
**Universal Motor Co.** (Gas engines), Oshkosh, Wis.  
**Universal Nozzle Co.** (Nozzles), 302 Chamber of Commerce, Indianapolis, Ind.  
**Universal Oxygen Co.** (Welding trucks), Sheboygan, Wis.; 554-556 E. Water St., Milwaukee, Wis.  
**Universal Pipe Strap Co.** (Pipe straps), York St., West Chicago, Ill.  
**Universal Road Machinery Co.** (Road mach'y), Kingston, N. Y.; 141 Milk St., Boston; 711 Powers Bldg., Rochester; Box 635, Harrisburg, Pa.  
**Universal Sanitary Mfg. Co.** (Sanitary pottery), New-castle, Pa.  
**Universal Steel Co.** Bridgeville, Pa.  
**Universal Tube Co.** (Pneumatic tubes), 319 W. Ohio St., Chicago.  
**Universal Valve Co.** (Packless valves), Burlington, Wis.  
**Uno Ventilator Co.** (Ventilators), Newton, N. H.; Cliftondale, Mass.  
**Upson-Walton Co.** The (Well drilling cables), 1310 W. 11th St., Cleveland, O.; 711 S. Wells St., Chicago; 291 Broadway, New York; 1103 Bessemer Bldg., Pittsburgh.  
**Up-to-Date Tool Co.** (Metal working tools), 81 Wareham St., Boston, 18 Mass.  
**Upton & Gilman Machine Co.** (Power transmission mach'y), 587 Middlesex St., Lowell, Mass.  
**Usona Mfg. Co.** (Wire goods), 826 So. 18th St., St. Louis, Mo.  
**Utica Drop Forge & Tool Co.** (Pliers, nippera, etc.), 68 Murray St., New York; 2415 Whitesboro St., Utica, N. Y.  
**Utica Heater Co.** (Heating furnaces and boilers), Utica, N. Y.; 218 W. Kinzie St., Chicago.  
**Utica Valve and Fixture Co.** (Gas lighting fittings), 300-304 Hubbell St., Utica, N. Y.; 50 Church St., New York; 68 Devonshire St., Boston, Mass.; 83/ Real Estate Trust Bldg., Philadelphia.  
**Utility Compressor Co.** (Priming cups and air cocks), Treat Road & Wabash R. R., Adrian, Mich.  
**Utility Co., Inc.** The (Hand soap), 636-638 W. 44th St., New York, N. Y.  
**Utility Product Co.** (Soot destroyer), Omaha, Neb.  
**Utility Supply Co.** (Pipe joint cement), 329 N. Fourth St., Philadelphia, Pa.  
**Utiley, A. B. & Co.** (Flush valve reseater), 942 Ross St., Springfield, Mo.
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- Vac Liquid Equipment Co.** The (Pumps, tanks, etc.), Cedar Rapids, Ia.  
**Vacuum Ash & Soot Conveyor Co.** (Ash conveyors), Wilson Ave., Newark, N. J.  
**Vacuum Heating Co.** (Steam heating equipment), Juniper & Cherry Sts., Philadelphia, Pa.  
**Vacuum Oil Co.** (Lubricants), Rochester, N. Y.; 343 S. Dearborn St., Chicago, Ill.; 49 Federal St., Boston, Mass.; 41 Broadway, New York, N. Y.  
**Valle & Kimes Co.** (Water motors), 35 St. Clair St., Dayton, O.  
**Vajen Helmet Co.** The (Smoke helmets), Richmond, Ind.  
**Valk & Murdock Co.** (Boilers and mach'y), Charleston, S. C.  
**Valley City Machine Works** (Machine tools and woodworking grinding machinery), Campau and Fulton Sts., Grand Rapids, Mich.  
**Valley Iron Works** (Steam engines, power transmission mach'y), 233 West St., Williamsport, Pa.; 30 Church St., New York, N. Y.  
**Valley Iron Works Co.** (Beating engines), Appleton, Wis.  
**Valley Machinery Co.** (Sanding and polishing machines), Parkersburg, W. Va.  
**Valve Bag Co.** The (Bag fillers), Toledo, O.  
**Valve Seating Tool Co.** The (Valve seating tools), Southport, Conn.  
**Valvoline Oil Co.** (Lubricating oil), 60 Broadway, New York, N. Y.; Boston; Philadelphia; Pittsburgh; Cincinnati; Chicago; St. Louis; Denver; San Francisco; Los Angeles; Portland; Seattle.  
**Van Arnam Mfg. Co.** (Water closet combinations, tanks, seats), Ft. Wayne, Ind.  
**Van Expansion Bolt Mfg. Co.** (Expansion bolts), 4845 Lowell St., Chicago, Ill.  
**Vance, J. A. Co.** (Sawmill mach'y), Winston-Salem, N. C.  
**Vance, J. R.** Boiler Works (Steam heating boiler), Geneva, N. Y.  
**Vandergrift & Morris** (Bolts, nuts, mach'y guards), Shelbyville, Ind.  
**Vanderman Mfg. Co.** The (Vises, holders, pipe cutters), Willimantic, Conn.; 172 Pearl St., Hartford, Conn.  
 (See index to advertisement, pages 7, 8 and 9.)  
**Van Dervoort Hdw. Co.** (Belt dressing), Lansing, Mich.  
**Vanadium Corp. of America**, Bridgeville, Pa.; 120 Broadway, N. Y.  
**Van Dorn & Dutton Co.** The (Gears), 2978 Woodhill Rd., Cleveland, O.; San Francisco; Atlanta; Milwaukee; Chicago; Denver, El Paso; New York; Salt Lake City.  
**Van Dorn Electric Tool Co.** (Electric tools), 2978 Woodhill Rd., Cleveland, O.; New York; Chicago; Chattanooga; Milwaukee; Detroit; St. Paul; Los Angeles; Pittsburgh; Cincinnati; Denver; San Francisco; St. Louis; Philadelphia; Seattle.  
**Van Dusen-Royce Co.** (Gas engines), Columbus, O.  
**Van Ness Slate Co.** (Slate tubs), Newark, N. J.  
**Van Norman Machine Tool Co.** (Grinding machines), 150-170 Wilbraham Ave., Springfield, Mass.  
**Van Nostrand Mfg. Co.** (Lubricating grease), 507 W. 16th St., New York, N. Y.  
**Van Riper Mfg. Co.** (Leather belting), Paterson, N. J.  
**Vant-Woud Rubber Co.** The (Bath brushes), 19 Bush Terminal, Brooklyn, N. Y.  
**Van Zandt Gas Appliance Co.** (water heaters) St. Louis, Mo.  
**Vapor Heating Co.** North American Bldg., Philadelphia, Pa.  
**Vapor Regulator Co.** (Temperature regulators), 3203 Columbia Ave., Philadelphia, Pa.; 300 Lynch Bldg., Lynchburg, Va.  
**Vapor Vacuum Heating Co.** (Heating specialties), Otis Bldg., Philadelphia, Pa.; New York; Detroit.  
**Vapor-Valve Co.** (Painting machines), 2820 N. Spring Ave., St. Louis, Mo.  
**Varwig Mfg. Co.** (Water heaters), 120 Opera Pl., Cincinnati, O.  
**Vasil Steam Systems Co.** (Stockers), 314-318 Washington Loan & Trust Bldg., Washington, D. C.  
**Vaughan & Bushnell Mfg. Co.** (Small forged tools), 2130 Carroll Ave., Chicago, Ill.  
**Vaughn Machinery Co.** (Wire and chain machinery), Cuyahoga Falls, O.  
**Veeder Mfg. Co.** (Speed indicators, etc.), 50 Sargent St., Hartford, Conn.  
**Velco Mfg. Co., Inc.** (Broaches, etc.), Greenfield, Mass.  
**Velte Foundry & Machine Co.** (Gas valves), Mars, Pa.  
**Venn-Severin Machine Co.** (Oil engines), 1317 W. North Ave., Chicago, Ill.  
**Verdin, Kappes & Verdin Co.** The (Sheet metal mach'y), Cincinnati, O.  
**Vermont Marble Co.** (Plumbers' marble), Proctor, Vt.; Boston; New York; Philadelphia; Chicago; Cleveland; St. Louis; San Francisco; Tacoma; Dallas.  
**Verona Tool Works** (Tools, jacks, etc.), 1800 First Natl. Bank Bldg., Pittsburgh, Pa.  
**Vertical Condenser Co.** (Steam condensers), 123 6th Ave., Cincinnati, O.  
**Vesuvius Engineering Co., Inc.** (Water and house heaters), 505 Fifth Ave., New York.  
**Vertomatic Mfg. Co.** (Chuckling machines), 3rd and Buttonwood Sts., Reading, Pa.  
**Vibrating Machinery Co.** (Sand sifters), 546 W. Jackson Boul., Chicago.  
**Victor-Balata & Textile Belting Co.** (Cotton belting), 38 Murray St., New York, N. Y.; 167 N. Market St., Chicago, Ill.; 212 E. 2d St., Cincinnati, O.; 87 High St., Boston, Mass. Factory, Easton, Pa.  
**Victor Brass Mfg. Co.** The (Plumbing traps, etc.), 6813 Wade Park Ave., Cleveland, O.  
**Victor Mfg. & Gasket Co.** (Gaskets), 5750 W. Roosevelt Road, Chicago, Ill.  
**Victor Saw Works, Inc.** (Hack saw blades), Middletown, N. Y.  
**Victor Tool Co.** (Chucks, drills, etc.), Waynesboro, Pa.  
**Victor Tool & Mfg. Co.** (Screw machine products), 560 W. Van Buren St., Chicago, Ill.  
**Victor's Blow Torch Co.** (Blow torches), 44 E. Galena St., Butte, Mont.  
**Victory Foundry & Machine Co., Inc.** (Woodwork-ing mach'y), 419 Broadway, Buffalo, N. Y.  
**Victory Manufacturing Co.** (Engines and pipe fittings), Monadnock Bldg., San Francisco, Calif.  
**Viking Shear Co.** (Metal cutting shears), Erie, Pa.  
**Vilter Mfg. Co.** The (Ice and refrigerating mach'y), 850-900 Clinton St., Milwaukee, Wis.; Los Angeles; Salt Lake City; Wellington.  
**Vim Motor Co.** (Gas engines), 636 E. Water St., Sandusky, O.  
**Vitrified Wheel Co.** The (Emery, grinding, corundum wheels), Westfield, Mass.  
**Vitrolite Company.** The (Toilet room partition), 123 W. Washington St., Chicago, Ill.



- Vixen Tool Co. (Files and rasps), 858 Summer Ave., Newark, N. J.
- Vlcek Tool Co., The (Small tools), 3000 East 87th St., Cleveland, O.; 40 S. Clinton St., Chicago; 100 Church St., New York.
- V & O Press Co., The (Presses and dies, sheet metal mach'y), Brooklyn, N. Y.
- Vogel, Joseph A., Co. (Frost proof closet), Wilmington, Del., St. Louis, Mo.  
(See index to advertisement, pages 7, 8 and 9.)
- Vogel, Wm., & Bros. (Oil cans), 37 S. 9th St., Brooklyn, N. Y.; 180 N. Market St., Chicago.
- Vogt Brothers Mfg. Co. (Refrigerating machinery), Louisville, Ky.
- Vola Trading Corp. (Leak locaters), 42 Broadway, N. Y.
- Volcano Torch & Mfg. Co., The (Blow torches), 237 E. 22d St., Erie, Pa.
- Volkhardt Co., Inc., The (Hydrants), 83 Prospect St., Stapleton Sta., Staten Island, N. Y.
- ♦ Voorhees Rubber Mfg. Co. (Belting and hose), 18-46 Bostwick Ave., Jersey City, N. J.; 38 Vesey St., New York, N. Y.
- Vulcan Asbestos Mfg. Co., Inc. (Packings, etc.), 95 Broad St., New York, N. Y.; Westfield, N. J.
- Vulcan Brass Mfg. Co. (Plumbing brass goods), 9108 Woodlawn Ave., Cleveland, O.
- Vulcan Crucible Steel Co. (Tool steel), Alliquippa, Pa.; 16 S. Clinton St., Chicago, Ill.; Boston; Philadelphia; Pittsburgh; St. Louis.
- Vulcan Fuel Economy Co. (Sootcleaners), 608 S. Dearborn St., Chicago.
- Vulcan Iron Works (Hydraulic presses), 327 N. Irving Ave., Chicago, Ill.
- Vulcan Mfg. Co. (Air compressors), 1511 Cypress St., Kansas City, Mo.
- Vulcan Mfg. Co. (Grease cups), 1200 Fourth Ave., So., Seattle, Wash.
- Vulcan Tool & Machine Works, Inc. (Heaters), 36 Carter St., Newburgh, N. Y.
- Vulcan Tool Mfg. Co., The (Small tools), Quincy, Mass.
- W**
- Wachs, E. H., Co., The (Steam engines), 1525 Dayton St., Chicago, Ill.
- Wade, Levi C. (Gas engines, etc.), Lynn, Mass.
- Wadhams Oil Co. (Belt dressing), Milwaukee, Wis.
- Wade Iron Sanitary Mfg. Co., The (Plumbers' traps and pumps), 553 W. Fulton St., Chicago, Ill.
- Wade-American Tool Co., The (Bench lathes), 49-59 River St., Waltham, Mass.
- Wadsworth Core Machine & Equipment Co. (Core making machines), Akron, O.
- Wagener Steam Pump Works (Steam pumps), Canton, Ohio.
- Wagenhorst, J. H., Co. (Blueprint machinery), 512 Andrews Ave., Youngstown, O.
- Wagner Glass Works (Thermometers), Camden, N. J.
- Wagner Electric Mfg. Co., (Motors and dynamos), St. Louis, Mo.
- Wahlstrom Tool Co. (Oil cups, chucks, etc.), 5520 2d Ave., Brooklyn, N. Y.
- Waite-Wild Asbestos Co. (Asbestos textiles), Framingham, Mass.
- Wakefield, Clarence E. (Wrenches), 89 Exchange St., Worcester, Mass.
- Wakefield, F. W., Brass Co., The (Gas lighting fixtures), Vermillion, O.
- Wakeman, D. G. (Septic tanks), Portland, Ind.
- Walcott Lathe Co. (Metal working mach'y), 414 N. Jackson, Jackson, Mich.
- Walden-Worcester, Inc. (Wrenches), Worcester, Mass.; 304 S. Dearborn St., Chicago; 295 Br'dway, New York; 487 Monadnock Bld., San Francisco.
- Waldo Bros. & Bond Co. (Contractors' supplies), 383 Atlantic Ave., Boston, Mass.
- Walker's, Chas. W., Sons & Co. (Leather belting), 46 West Market St., Newark, N. J.
- Walker, James, & Co., Ltd. (Rubber packing), 46 West St., New York, N. Y.
- Walker Mfg. Co. (Jacks), Racine, Wis.
- Walker Metallic Packing Co. (Packings), 4617 Tacony St., Frankford, Philadelphia, Pa.
- Walker Mfg. Co. (Pipe joints), Fenton, Mich.
- Walker Mfg. & Supply Co. (Plumbing supplies), 203 Woodbridge, Detroit, Mich.
- Walker, O. S., & Co. (Magnetic chucks), Worcester, Mass.
- Walker & Pratt Mfg. Co. (Heating boilers), 31-35 Union St., Boston, Mass.
- Walker, Thomas, & Sons (Steam packings), 4617-21 Tacony St., Frankford, Philadelphia, Pa.
- Wall, P., Mfg. Supply Co., The (Oilers, etc.), 3058 Preble Ave., Pittsburgh, Pa.
- Wallace Barnes Co. (Springs), Bristol Conn.; Book Bldg., Detroit.
- Wallace, J. D., & Co. (Bench planers), 1407 W. Jackson Blvd., Chicago, Ill.; Boston; Buffalo; New York; Philadelphia; Pittsburgh; Middletown, O.; Louisville; Knoxville, Tenn.; St. Louis; Denver; San Francisco; Cleveland.
- Wallace Supply Co. (Angle benders), 412-420 Orleans St., Chicago, Ill.; 233 Broadway, New York.
- Walls, Owen & Stambach Co. (Baths and water closets), Ridge Ave., 11th and Hamilton Sts., Philadelphia, Pa.
- Wall Rope Works, Inc. (Drilling cables), 48 South St., New York, N. Y.
- Walls, T. P., Tool & Supply Co., Inc. (Boring tools), 25 Leonard St., New York.
- Walsh Boiler & Iron Works, The (Tanks and boilers), 221 Liberty St., Springfield, Mass.
- Walsh, Ed., (Simplex Boiler Works) (Boilers and tanks), Marion, Ind.
- Walsh, M. J., Machinery Co. (Packing), 129 Second St., Milwaukee, Wis.
- Walsh, Owen, Mfg. Co., The (Shower baths and water filters), 525 W. 26th St., New York, N. Y.
- Walsh Packing Co. (Packing and gaskets), 304 New St., Philadelphia, Pa.
- Walsh Press & Die Co. (Power presses), 4709 W. Kinzie St., Chicago, Ill.
- Walsh & Weidner Boiler Co., The (Boilers, tanks, etc.), Ash and Grove Sts., Chattanooga, Tenn.; 11 Broadway, New York; 143 2nd St., San Francisco; P. O. Box 16, Kansas City, Mo.; 908 Canal Com'l Bldg., New Orleans; 456 Randolph Bldg., Memphis; 411 Duval Bldg., Jacksonville, Fla.
- Walters Mfg. Co. (Oilers and torches), Fulton Bldg., Pittsburgh, Pa.  
(See index to advertisement, pages 7, 8 and 9.)
- Waltham Appliance Co. (Screw machine work), Waltham, Mass.
- Waltham Grinding Wheel Co. (Grinding wheels), Waltham, Mass.; 152 N. 3d St., Philadelphia, Pa.
- Waltham Machine Works (Lathes, etc.), 296 Newton St., Waltham, Mass.
- Walton Co., The (Broken tap extractors), Hartford, Conn.
- Walton, C. J., & Son (Power boilers), Louisville, Ky.
- Walton, F. S., Co., The (Belt dressing), Orthodox and Delaware Sts., Philadelphia, Pa.
- Walton, James (Gas generators), Phenicia, N. Y.
- ♦ Walworth Mfg. Co. (Valves, fittings, etc.), Boston, Mass.; New York; Philadelphia; Chicago; Seattle; Portland, Ore.; Kewanee, Ill.
- Wapakoneta Machine Co., Wapakoneta, O.
- Ward, Chas. H., Engineering Works, The (Power boilers), Charleston, W. Va.
- Ward-Love Pump Corp. (Pumps), Rockford, Ill.
- Ware Coupling & Nipple Co. (Couplings and nipples), Ware, Mass.
- Wardwell Mfg. Co., The (Machines), 110-112 Hamilton Ave., Cleveland, O.
- Warley, Thos. C., & Co. (Boiler compound, etc.), 211-217 Bainbridge St., Philadelphia, Pa.; 617 W. Fulton St., Chicago.
- Warner Elevator Mfg. Co. (Elevators), 2613-31 Spring Grove Ave., Cincinnati, O.; Indianapolis; Cleveland; Dayton; New York.
- Warner & Swasey Co., The (Metal working mach'y), 5809 Carnegie Ave., S.E., Cleveland, O.; 149 Broadway, New York; 5928 2nd Blvd., Detroit; 618-22 Washington Blvd., Chicago.
- Warner, W. E. (Mill brushes), 136 Centre St., New York, N. Y.
- Warnock Mfg. Co. (Pipe wrenches and vises), Worcester, Mass.  
(See index to advertisement, pages 7, 8 and 9.)
- Warren Axe & Tool Co. (Axes, etc.), Warren, Pa.
- Warren Belting Co. (Leather belting), Arctic St., Worcester, Mass.
- Warren Brothers Company (Slushing compound), 142 Berkeley St., Boston, Mass.
- Warren, J. D., Mfg. Co. (Store fixtures), Masonic Temple, Chicago, Ill.
- Warren Chemical Div. The Barrett Co. (Asphalt products), 40 Rector St., New York, N. Y.; 49 Federal St., Boston, Mass.
- Warren City Tank & Boiler Co. (Boilers and tanks), Warren, O.
- Warren Clock Co. (Clocks), Ashland, Mass.
- Warren Foundry & Machine Co. (Pipe and fittings), 11 Broadway, New York, N. Y.; Sitgraves St., Phillipsburg, N. J.; 201 Devonshire St., Boston.
- Warren-Knight Co. (Levels), 136 N. 12th St., Philadelphia, Pa.
- Warren Lubricant Co. (Oils and greases), 22 Maurice St., Buffalo, N. Y.; 27 Coenties Slip, New York; 608 S. Dearborn St., Chicago.
- Warren Steam Pump Co. (Steam pumps, etc), Warren, Mass.
- Warren Tool & Forge Co., The (Forged tools), 258 Griswold St., Warren, C.
- Warsaw Elevator Co. (Passenger and freight elevators), Warsaw, N. Y.; Philadelphia; Baltimore; Springfield; Buffalo; Rochester.
- Warwood Tool Co. (Coal miners' tools), Wheeling, W. Va.
- Washburn & Granger (Boiler grates), 50 Church St., New York, N. Y.
- Washburn Shops (Lathes, grinders, presses), Worcester, Mass.
- Washburne, E. G., & Co. (Ventilators), 207 Fulton St., New York, N. Y.
- Washington Iron Works (Logging mach'y), Seattle Blvd. and Norman St., Seattle, Wash.

- Washington Iron Works (Porcelain enameled lavatories), Sacramento and Wilson Sts., Los Angeles, Cal.
- Washington Machinery & Supply Co. (Log loaders), 9 E. Cataldo St., Spokane, Wash.
- Washington Mills Emery Co. (Turkish emery), North Grafton, Mass.
- Washington Pipe & Foundry Co. (Wooden water pipe), 1512-1620 Center St., Tacoma, Wash.; 3904 Woolworth Bldg., New York.
- Waterbury Brass Goods Corp. (Hose Couplings), 26 Crane St., Waterbury, Conn.; Chicago; New York; Philadelphia.
- Waterbury Clock Co. (Engine room clocks), Waterbury, Conn.; 137 Centre St., New York; 215 W. Randolph St., Chicago; 150 Post St., San Francisco, Cal.
- ♦ Waterbury Co. (Wire rope), 63 Park Row, New York, N. Y.; Chicago; New Orleans; San Francisco.
- Waterbury-Farrel Foundry & Machine Co., The (Heavy mach'y), Waterbury, Conn.; 1016 Williamson Bldg., Cleveland, O.
- Waterbury Mfg. Co. (Washers, nipples, etc.), Waterbury, Conn.  
(See index to advertisement, pages 7, 8 and 9.)
- Waterbury Rolling Mills, Inc. (Sheet metals), Waterbury, Conn.
- Waterbury Wire Die Co. (Wire drawing dies), Waterbury, Conn.
- Waterhouse Welding Co. (Welding apparatus), 15 Pelham St., Boston, Mass.
- Waterloo Gasoline Engine Co. (Gas engines), Waterloo, Ia.
- Waterloo Register Co. (Warm air registers), Waterloo, Ia.; Seattle, Wash.
- Waterman-Waterbury Co., The (Boilers and furnaces), 1121 Jackson St., N. E., Minneapolis, Minn.
- Waterston, J. M. (Tap and drill stands), 427 Woodward Ave., Detroit, Mich.
- Waterous Engine Works Co. (Fire engines and hydrants), St. Paul, Minn.
- Water Works Equipment Co. (Water works specialties), 50 Church St., New York, N. Y.
- Waters Governor Co. (Valves and governors), 1122 Oliver Bldg., Boston, Mass.
- Watertite Drain & Scupper Co., Inc. (Floor drains), 137 East 46th St., New York, N. Y.
- Watertown Specialty Co. (Water gauges), Watertown, N. Y.
- Watrous Co., The (Water closets), 524 So. Racine Ave., Chicago, Ill.
- Watson, H. F. Co. (Asbestos goods), Erie, Pa.; 319 Wells St., Chicago; 79 Milk St., Boston.
- Watson & McDaniel Co. (Steam specialties), 146 N. 7th St., Philadelphia, Pa.  
(See index to advertisement, pages 7, 8 and 9.)
- ♦ Watson, L. S. Mfg. Co., Leicester, Mass.
- Watson, N. A. (Injectors), 2016 State St., Erie, Pa.
- Watson-Penfield Corp. (Pipe joint cement, etc.), 381 Clinton St., New Bedford, Mass.
- Watson-Stillman Co., The (Hydraulic mach'y), Aldene, Union Co., N. J.; 50 Church St., New York, N. Y.; 332 S. Michigan Ave., Chicago; Widener Bldg., Philadelphia.
- Watt, Robert, Mfg. Co. (Gas-steam radiators), 1701-1703 N. 20th St., Philadelphia, Pa.
- Watt Mining Car Wheel Co. (Mine cars), Barnesville, Ohio.
- Watts, Campbell Co., The (Steam engines), Newark, N. J.
- Watts Regulator Co. (Pressure regulators and steam traps), 250 Lowell St., Lawrence, Mass.  
Washington Boul., Chicago.
- Watt's, John M., Sons (Steam packing), 54 N. 2nd St., Philadelphia, Pa.
- Wausau Abrasives Co. (Sand paper), Wausau, Wis.; 30 Warren St., New York, N. Y.; 514 Detroit Sav. Bk., Detroit, Mich.
- Waverly Oil Works Co. (Lubricating oils), 54th St. and A. V. Ry., Pittsburgh, Pa.
- Way, A. F., Co., Inc. (Pipe supports), Hartford, Conn.
- Waymoth, A. D., & Co. (Wood turning lathes), Newton Pl., Fitchburg, Mass.
- Wayne Belting Co. (Leather belting), Fort Wayne, Ind.
- Wayne Oil Tank & Pump Co., The (Oil tanks), Fort Wayne, Ind.
- Wayvell-Chappell & Co. (Floor surfaces), 139 N. Jackson St., Waukegan, Ill.
- Wear Proof Mat Co. (Mats and matting), 2156 Fulton St., Chicago, Ill.
- Wearwell Gasket & Packing Co. (Gaskets and packings), Camden, N. J.
- Weatherhead-Thompson Co. (Leather belting), Pawtucket, R. I.
- Weaver Mfg. Co. (Drill chucks), Springfield, Ill.
- Webb Bros. Belting Co. (Leather belting), 304 Union St., Kansas City, Mo.
- Webb City & Carterville Fdy. & Mach. Wks. (Rock crushers), Webb City, Mo.
- Webb, Thomas A. (Boiler tube plugs), 122 Commerce St., Newark, N. J.
- Webb, Chas. J., & Sons Co. (Wool and cotton waste), 116 Chestnut St., Philadelphia, Pa.
- Webb Ellisha, & Son Co. (Boiler flue plugs), 136 S. Front St., Philadelphia, Pa.
- Webb, J. F., Mfg. & Supply Co. (Foundry mach'y), Davenport, Ia.
- Webb Manufacturing Co. (Flexible shafting), 245-47 N. J. R. R. Ave., Newark, N. J.
- Webb, F. W., Mfg. Co. (Plumbing brass goods), 52 Elm St., Boston, Mass.; Palmer & Middle Sts., Lowell, Mass.
- Webber Bros. Metal Works (Copper floats), 108-128 No. Jefferson St., Chicago, Ill.  
(See index to advertisement, pages 7, 8 and 9.)
- Webber Chimney Co. (Concrete chimneys) 1452 McCormick Bldg., Chicago, Ill.
- Webber-Erickson-Bunting Co. (Steel products), 221 Diamond St., Pittsburgh, Pa.
- Weber, F., & Co. (Draftsmen's instruments), 1126 Chestnut St., Philadelphia, Pa.
- Weber Mfg. Co. (Floor surfaces), 684 73d Ave., West Allis, Wis.
- Weber Subterranean Pump Co. (Pumps), 50 E. 42d St., New York, N. Y.
- Webster, Camp & Lane Co. (Steam engines), Akron, O.
- ♦ Webster Mfg. Co. (Elevating, conveying and power transmission machinery), 4560 Cortland St., Chicago; 90 West St., New York; 902 Oliver Bldg., Boston, Mass.; 1914 Union Central Life Ins. Bldg., Cincinnati, O.; 509 Sweetland Bldg., Cleveland, O.; 572 Ellicott Sq. Bldg., Buffalo; 719 Commercial Trust Bldg., Philadelphia; Monadnock Bldg., Chicago.
- Webster & Perks Tool Co. (Emery grinders), Springfield, O.
- Webster, Warren & Co. (Steam heating specialties), Point and Pearl Sts., Camden, N. J.; 71 Murray St., New York; 805 Stephen Girard Bldg., Philadelphia; 1108 Penn Mutual Bldg., Boston; 53 W. Jackson Blvd., Chicago; Boston Bldg., Denver; 213 Sixth Ave., Pittsburgh; Empire Bldg., Atlanta; 706 Rose Bldg., Cleveland; 729 Claypool Bldg., Indianapolis; 500 Bk. of Com. Bldg., Minneapolis; 1415 Chemical Bldg., St. Louis; 507 Victor Bldg., Kansas City; 326 Hennen Bldg., New Orleans; Lumber Exchange, Seattle.
- Wedell & Boers (Tool cases), 28 W. Jefferson Ave., Detroit, Mich.
- Weigel Machine Tool Co. (Drilling machines), Peru, Ind.
- Weil-McLain Co. (Boilers and heaters), 641 W. Lake St., Chicago; Michigan City, Ind.; Fort Dodge, Ia.
- Weimer Chain & Iron Co. (Chains), Lebanon, Pa.
- Weimer Machine Works Co. (Wheelbarrows), Lebanon, Pa.
- Weinhagen & Hespe (Thermometers), 159 Leonard St., New York.
- Weinman Pump Mfg. Co., The (Steam pumps), Columbus, O.; 4085 Jenkins Arcade Bldg., Pittsburgh, Pa.
- Weintz Bros. (Boilers), Evansville, Ind.
- Weiss, Henry, Mfg. Co. (Metal sash and doors), Atchison, Kan.; New York; Boston; Chicago.
- Welsbecker, Francis A., & Sons (Polishing machines), 22-24 Frost St., Brooklyn, N. Y.
- Welskittel, A., & Son Co. (Enameled plumbing ware, etc.), 12th & Lombard St., Baltimore, Md.  
(See index to advertisements, pages 7, 8 and 9.)
- Wells, A. A., & Son (Thermometers), 572 Gates Ave., Brooklyn, N. Y.
- Welch, T. F., & Co. (Machinists' tools, etc.), 55 Sudbury St., Boston, Mass.
- Weld, Geo. A., & Co. (Power plant specialties), 79 Milk St., Boston, Mass.
- Weld Wire Co., The (Welding wire), 395 Christopher St., Brooklyn, N. Y.
- Weldarline Mfg. Co., The (Welding compounds), Topeka, Kan.
- Weldcraft Equipment Co. (Welding equipment), 2501 Penn Ave., Pittsburgh, Pa.; 208 N. 16th St., Philadelphia.
- Welded Steel Barrel Corp., The (Steel barrels), Hart and Charlevoix Sts., Detroit, Mich.
- Weldex Mfg. Co. (Welded tanks), Richmond, Ind.
- Weldum Products Co. (Welding compound), 222 E. Ohio St., Indianapolis, Ind.
- Weller Mfg. Co. (Conveying mach'y), 1856 N. Kostner Ave., Chicago, Ill.; 50 Church St., New York; Garrett Bldg., Baltimore; 920 Kearns Bldg., Salt Lake City, Utah; 112 Water St., Boston, Mass.; 613 Lincoln Bldg., Philadelphia; Jenkin Arcade Bldg., Pittsburgh.
- Wellington Machine Co. (Brick making mach'y), Wellington, O.
- Wellman-Seaver-Morgan Co., The (Water power equipment), 7000 Central Ave., S.E., Cleveland, O.; Hudson Terminal Bldg., New York.
- Wells, A. H., Co. (Copper tubing), 563 Watertown Rd., Waterbury, Conn.; 302 Lincoln Bldg., Detroit; First Nat'l Bank Bldg., Chicago.
- Wells Chemical Bronze Works (Babbitt metals), 65 Temple St., Worcester, Mass.
- Wells, Frank L., Co. (Wire working machines), Kenosha, Wis.
- Wellston Mfg. Co. (Bolt display cabinets), Wellston, O.  
(See index to advertisements, pages 7, 8 and 9.)

- Welsh, William** ("Star" water filters and filtering stones), 2723 Arbor Ave., Cincinnati, O.  
(See index to advertisement, pages 7, 8 and 9.)
- Wendnagel & Co.** (Tanks, vats, etc.), 600 W. 22d St., Chicago, Ill.
- Wenkenbach's, Wm., Sons** (Trucks and wheelbarrows), 1314 Germantown, Philadelphia, Pa.
- Wensley Metal Products Co.** (Tanks), 18th and Blake Sts., Denver, Colo.
- Wentink Mfg. Corp.** (Car removers), Menasha, Wis.; 311 River St., Chicago.
- Wentz-Yoder Mfg. Co.** (Thermostats), 1024 E. of L. E. Bldg., Cleveland, O.
- Wenzelmann, G.** (Paper balers), Galesburg, Ill.
- Wesely, Chas., Co.** (Laundry tubs), 3126 S. Canal St., Chicago, Ill.
- Wessels, D. D., & Son** (Laundry traps), 1635 E. Euclid Ave., Cleveland, O.; Kansas City, Kan.; Windsor, Canada.
- West Disinfecting Co.** (Disinfecting supplies), 411 Fifth Ave., New York, N. Y. Branches in all principal cities.
- West & Dodge Co.** (Thread gages), Faneuil Sta., Boston, Mass.
- Westfield Plate Co.** (Lead hammers), Thompsonville, Conn.
- West Side Iron Works** (Band saws), N. Front St., Grand Rapids, Mich.; 1227 Wash. Boul., Chicago.
- West Steel Casting Co.** The (Lathe dogs), 805 E. 70th St., Cleveland, O.
- West Tire Setter Co.** The (Tire setting machines), 255 Mill St., Rochester, N. Y.
- West Virginia Pulp & Paper Co.** (Friction boards), 200 Fifth Ave., New York, N. Y.; Printers Bldg., Chicago, Ill.
- Westcott Chuck Co.** (Drill and lathe chucks), Oneida, N. Y.
- Western Asbestos & Mfg. Co.** (Pipe covering), W. 33d and Mariposa Sts., Denver, Colo.
- Western Automatic Machine Screw Co.** The (Screw machine products), 901 Foster Ave., Elyria, O.; 1019 Dime Bank Bldg., Detroit.
- ◆ **Western Block Co.** (Tackle blocks), Lockport, N. Y.; 74-76 Murray St., New York; 34 N. Clinton St., Chicago.
- Western Boiler Compound & Chemical Co.** (Boiler compound), Kansas City, Mo.
- Western Electric Co.** (Electric supplies), 500 S. Clinton St., Chicago, Ill.
- Western Gas Construction Co.** (Gas plant mach'y), Ft. Wayne, Ind.; 25 Broad St., New York; 86 Third St., San Francisco.
- Western Hardware Mfg. Co.** (Tool grinders), 855 Third St., Milwaukee, Wis.
- Western Machine Tool Works** (Radial drills), Holland, Mich.
- Western Machinery Co.** (Gas engines), Los Angeles, Cal.; San Francisco, Calif.; Bakersfield, Calif.
- Western Oil Pump & Tank Co.** (Gasoline storage equipment), St. Louis, Mo.
- Western Pipe & Steel Co.** (Steel tanks and pipe), Los Angeles, Cal. Plant at Richmond, Cal.
- Western Pulley Stone Co.** (Pulley covering), 319 W. Chicago Ave., Chicago, Ill.
- Western Pump Co.** (Water supply outfits), Davenport, Ia.; Chicago, Portland, San Francisco, Seattle.
- Western Pump & Machinery Co.** (Pumps), 1912 University Ave., St. Paul, Minn.
- Western Robe Mills** (Vehicles washers), 162 N. Desplaines St., Chicago, Ill.
- Western Rawhide & Belting Co.** (Leather belting), 901-35 Winnebago St., Milwaukee, Wis.
- Western Rubber Co.** The (Mechanical rubber goods), 9th and Douglas, Goshen, Ind.
- Western Screw Products Co.** (Screw machine products), 3219 South Broadway, St. Louis, Mo.
- Western Slate Co.** (Plumbers' slate), 326-328 Aberdeen St., Chicago, Ill.
- Western States Porcelain Ware Works** (Sanitary earthenware), Richmond, Cal.
- Western Supply Co.** The (Heating boilers), Park Square, St. Paul, Minn.; Fargo, N. D.
- Western Supply & Mfg. Co.** (Band and hack saws), 25 S. Clinton St., Chicago, Ill.
- Western Tinware Co.** (Engineers' rollers), 1308 N. 16th St., St. Louis, Mo.
- ◆ **Western Tool & Mfg. Co.** The (Saws, tools, etc.), Springfield, O.
- Western Wheelbarrow Mfg. Co.** (Wheelbarrows), South Fort Smith, Ark.
- Western Wrought Washer Co.** (Washers), Los Angeles, Cal.
- Westinghouse Traction Brake Co.** The (Air brake equipment), Pittsburgh, Pa.; Railway Exchange, Chicago; 165 Broadway, New York; Munsey Bldg., Washington; Southern Pacific Bldg., San Francisco; Broadway & Tyler Sts., St. Louis, Mo.
- Westinghouse Electric & Mfr. Co.** (Motors, lamps, switches, etc.), Philadelphia, East Pittsburgh, Pa.; New York, Atlanta, Baltimore, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Kansas City, Los Angeles, Minneapolis, New Orleans, St. Louis, Salt Lake City, San Francisco, Seattle, Syracuse, Birmingham, Charlotte, Knoxville, Richmond, Rochester, Milwaukee, Omaha, Indianapolis, Louisville, Houston, Toledo, Joplin, El Paso, Wilkes-Barre, Columbus, Memphis, Butte, Portland, Ore.; Spokane, Tacoma, Washington, Charleston, W. Va.; Chattanooga, Tenn.; Duluth, Minn.; Dayton, O.
- Westinghouse Machine Co.** The (Engines, turbines, stokers, etc.), East Pittsburgh, Pa.
- Westlund, Carl G., Co.** (Friction clutches and couplings), 498 Millbury St., Worcester, Mass.
- Wetter, H., Mfg. Co.** The (Iron pipe and fittings), Memphis, Tenn.
- Wetzel Mechanical Stoker Co.** The (Stokers), 1106 Broad St., Bank Bldg., Trenton, N. J.
- Wheaton, A. W., Brass Works** (Brewers' brass goods), 21 R.R. Pl., Newark, N. J.
- Wheel Truening Tool Co.** (Diamond importers), 2130 Penobscot Bldg., Detroit, Mich.; 20 W. Jackson Blvd., Chicago; 343 Engineers Bldg., Cleveland; 527 Fifth Ave., New York; 5 James St., St. Catharines, Canada.
- Wheeler Condenser & Engineering Co.** The (Condensers, heaters, pumps), Carteret, N. J.; New York, Boston, Philadelphia, Chicago, Pittsburgh, Cincinnati, Atlanta, Salt Lake City, Tucson, Cleveland, Denver, San Francisco, Seattle, Los Angeles, New Orleans, Birmingham.
- Wheeler, F. H., Mfg. Co.** (Foundrymen's gloves, leg-gings, etc.), 215 West Huron St., Chicago, Ill.
- Wheeler-McDowell Elevator Co.** (Elevators and hoists), 417-21 Canal St., New York, N. Y.
- Wheeler, C. H., Mfg. Co.** (Steam condensers), Lehigh Ave. and 18th St., Philadelphia, Pa.; 26 Cortlandt St., New York; 825 Marquette Bldg., Chicago.
- Wheeler & Twine** (Derricks), Foot 19th St., Brooklyn, N. Y.
- Wheeling Corrugating Co.** (Sheet metal goods), Wheeling, W. Va.; New York; Philadelphia; Chicago; St. Louis; Chattanooga; Kansas City.
- Wheeling Mold & Foundry Co.** (Mill machinery), Wheeling, W. Va.
- Wheeling Sanitary Mfg. Co.** (Plumbing fixtures), Wheeling, W. Va.
- Wheeling Steel Products Co.** (Sheet steel), Wheeling, W. Va.; 122 S. Michigan Ave., Chicago.
- Wheeling Steel Corporation** (Iron pipe), Wheeling, W. Va.; 30 Church St., New York, N. Y.; Oliver Bldg., Pittsburgh, Pa.; 1222 McCormick Bldg., Chicago, Ill.
- Wheeling Stove & Range Co.** (Gas and oil heaters), Wheeling, W. Va.; 29 Murray St., New York.
- Wheelock Mfg. Co.** (Metallic hose), Wheelock, Vt.
- Wheland Co.** The (Sawmill mach'y), Chattanooga, Tenn.
- Whipp Machine Tool Co.** (Shapers), Sidney, O.
- Whipple & Choate** (Metals), 423-59 Iranistan Ave., Bridgeport, Conn.
- Whitacre Boiler Co.** The (Boilers and radiators), Wellsville, O.
- Whitaker Mfg. Co.** The (Agricultural mach'y and tools), 409-413 S. Green St., Chicago, Ill.
- Whitcomb, Geo. D., Co.** (Mining mach'y), Rochelle, Ill.
- Whitcomb-Blaisdell Machine Tool Co.** (Lathes and planers), 677 Cambridge St., Worcester, Mass.; Cleveland, Detroit, Indianapolis, New York.
- White, A. E., Machine Works** (Saw swages), Eau Claire, Wis.
- White & Bagley Co.** The (Lubricants), 100 Foster St., Worcester, Mass.
- White, David, Co., Inc.** (Levels), 901-07 Chestnut St., Milwaukee, Wis.
- White Flushing Valve Mfg. Co.** (Flushing valves), 4023 Walnut St., Denver, Colo.
- White Fuel Oil Engineering Corp.** (Gas plants, etc.), 742 E. 12th St., New York.
- White Heat Products Co.** (Grinding wheels), Frazer, Pa.
- White, L. & I. J., Co.** (Edge tools), Perry and Columbian Sts., Buffalo, N. Y.; Box 203, Atlanta; 1718 Tribune Bldg., New York; 513 Star Bldg., St. Louis.
- White Mfg. Co.** (Water heaters), 93 Lafayette St., Newark, N. Y.
- White Star Refining Co.** (Lubricating greases), 5950 Avery, Detroit, Mich.
- Whiteacre, J. E., Mfg. Co.** (Gas machines), Rockford, Ill.
- Whitehead Bros. Rubber Co.** The (Mechanical rubber goods), Trenton, N. J.
- Whiting & Comstock** (Dividing head), 32 Union Place, Hartford, Conn.
- Whiting, Henry F.** (Leather belting), Lowell, Mass.
- ◆ **Whitlam, J. O., Mfg. Co.** (Pipe joint cement), Wadsworth, O.  
(See index to advertisement, pages 7, 8 and 9.)
- Whitlock Coil Pipe Co.** The (Plumbing brass goods), Hartford, Conn.; 149 Broadway, New York; Chicago; Philadelphia; Rochester, N. Y.
- Whitlock Cordage Co.** (Rope and cordage), 46 South St., New York, N. Y.; Manning and Communipaw Aves., Jersey City; 226 State St., Boston; 1303 Chamber of Commerce, Chicago; 512 Railway Exchange, Kansas City; Houston.



- Whitlock Mfg. Co. The (Belt dressing), 1506 West 112th St., Cleveland, O.
- Whitman Agricultural Co. (Gas engines, etc.), 6900 S. Broadway, St. Louis, Mo.
- ◆ Whitman & Barnes Mfg. Co. The (Drills, reamers, etc.), Akron, O.; 64 Reade St., New York; 120th St., betw. Morgan and Racine Ave., Chicago.
- Whitman Metal Goods Co. (Screw machine products), Whitman, Mass.
- Whitmore Mfg. Co. (Lubricants), Cleveland, O.
- Whitney, Baxter D., & Son (Woodworking mach'y), Wincendon, Mass.
- Whitney, F. E. Co. (Water motors, ice cream machines), 65 Sudbury St., Boston, Mass.
- Whitney Mfg. Co., The (Chains), 237 Hamilton St., Hartford, Conn.
- Whitney, W. A. Mfg. Co. (Metal punches), 715 Park Ave., Rockford, Ill.
- (See index to advertisement, pages 7, 8 and 9.)
- Whitney Metal Tool Co. (Metal working tools), 109 Forbes St., Rockford, Ill.
- Whitney Metal Tool Co. (Punches, shears), Rockford, Ill.
- Whitton, D. E. Machine Co., The (Drill chucks), New London, Conn.
- Wholey Boiler Works (Tubular boilers), Providence, R. I.
- Wickes Boiler Co. (Boilers), Saginaw, Mich.; 76 W. Monroe St., Chicago; 1216 Empire Bldg., Pittsburgh; 1116 Penobscot Bldg., Detroit; Seattle: Houston, Tex.
- Wickes Bros. (Mach'y and boilers), Saginaw, Mich.; 736 White Henry Bldg., Seattle; 501 Fifth Ave., New York.
- Wickwire Bros. (Wire cloth), Cortland, N. Y.
- Wickwire Spencer Steel Corp. (Wire and wire cloth), Worcester, Mass.; Buffalo, N. Y.; Boston, New York, Philadelphia, Detroit, Chicago, Tulsa, Okla.; San Francisco.
- Wieben, John, Co., The (Garage traps), 147 E. 125th St., New York, N. Y.
- Widdicombe-Reid Co. (Belt dressing), Vestaburg, Mich.
- Wiedeke, Gustav, & Co. (Tube cutters and expanders), 1837 Richard St., Dayton, O.
- Wiederholdt Construction Co. (Chimneys), 620 Bank of Commerce Bldg., St. Louis, Mo.
- Wiggins, A. V., & Co. (Lathe feeds), 384 W. Fayette St., Syracuse, N. Y.
- Wilbraham-Green Blower Co. (Pressure blowers), Pottstown, Pa.; 269 Monadnock Bldg., San Francisco.
- Wilby, Wm., Estate (Leather belting), Lowell, Mass.
- Wilcox, Crittenden & Co., Inc. (Marine hardware), Middletown, Conn.
- Wilcox, E. A. Mfg. Co. (Gaskets), 6330 Stony Island Ave., Chicago, Ill.; 1809 Park Row Bldg., New York, N. Y.
- Wilder Mfg. Co. (Gaskets), 17th and Clinton Sts., St. Louis, Mo.
- Wildes, Thomas, Son, Inc., 339 Fifth Ave., New York.
- Wildman Boiler Works (Tanks and boilers), 3026 Carroll Ave., Chicago, Ill.
- Wile Electric Furnace Co. (Furnaces, electric), Jenkins Arcade, Pittsburgh, Pa.
- Wilfert, John, Co. (Gate valves), 258 Broadway, New York, N. Y.
- Willfong, Millard F., Iron Works Co. (Galvanizing equipment), 52d St. and Grays Ave., Philadelphia, Pa.
- Wilhelmi, Edgar A., Inc., The (Gas engines), 71 Murray St., New York, N. Y.
- Wilkins, Geo. H., Co. (Gage glass cutters), 180 N. Market St., Chicago, Ill.; 30 Warren St., New York.
- (See index to advertisement, pages 7, 8 and 9.)
- Wilkinson, A. J., & Co. (Draw knives), 180 Washington St., Boston, Mass.
- Wilks, S., Mfg. Co. (Tanks, heaters), 3517-3539 Shields Ave., Chicago, Ill.
- Will & Baumer Co., The (Candles), Syracuse, N. Y.; New York, Chicago, Boston.
- Will-Burt Co., The (Vises), Orrville, Ohio.
- Willard Machine Tool Co. (Lathes), Cincinnati, O.
- Willard-Middletown Machine Co. (Dividing leads), Cincinnati, O.
- Willcox Engineering Co. (Mach'y guards), 900 S. Warren Ave., Saginaw, Mich.
- ◆ Williams Bros. (Well drilling machines), Ithaca, N. Y.
- ◆ Williams, D. T., Valve Co., The (Valves, traps, separators, etc.), Spring Grove Ave. and Township St., Cincinnati, O.
- Williams, E. A., & Son, Inc. (Babbitt metal), 105-111 Plymouth St., Jersey City, N. J.; 155 Livingston St., Elizabeth, N. J.
- Williams Foundry & Machine Co. (Friction clutches), Akron, O.
- Williams, Franklin, Inc. (Valves), 39-41 Cortlandt St., New York, N. Y.
- Williams, The G. H., Co. (Hoisting buckets), Erie, Pa.; 30 Church St., New York.
- Williams Gauge Co., The (Gauges, traps, etc.), 543-547 Fourth Ave., Pittsburgh, Pa.; 39 Cortlandt St., New York; representatives in principal cities.
- ◆ Williams, I. B., & Sons (Leather belting), Dover, N. H.; 14 N. Franklin St., Chicago; 72 Murray St., New York; 157 Summer St., Boston.
- ◆ Williams, J. H., & Co. (Wrenches, vises, etc.), 95 Richards St., Brooklyn, N. Y.; 95 S. Clinton St., Chicago, Ill.; Detroit; San Francisco. Plants: Brooklyn and Buffalo.
- Williams, Joseph, Co., Inc. (Boiler compound), Sharpsburg, Pa.
- Williams Machine Co. (Stone working mach'y), Poultney, Vt.; Ave. Madero 54, Apts. 1913, Mexico City.
- Williams Mill Mfg. Co., The (Feed mills), Ronda, N. C.
- Williams Patent Crusher & Pulverizer Co. (Crushing mach'y), 2701 N. Broadway, St. Louis, Mo.; 37 W. Van Buren St., Chicago; 67 Second St., San Francisco.
- Williams Tool Corp. (Pipe threading machines), Erie, Pa.; Brantford, Ont., Canada.
- Williams, White & Co. (Power hammers), 3rd Ave., 6th to 9th St., Moline, Ill.; 933 Monadnock Bldg., Chicago; 808 House Bldg., Pittsburgh; New York; Philadelphia.
- Williams, W. A. (Water closet tanks), 1211 Divisadero St., San Francisco, Calif.
- Williams, Wm. E. (Valves), 62 Front St., New York.
- Williamsburg Mfg. Co. (Hack saw frames), Williamsburg, Mass.
- Williamson, D. D., & Co. (Scale remover), 86 Fulton St., New York, N. Y.
- Williamson-Harris Manufacturing Co. (Hydraulic presses), Cordele, Ga.
- Williamson Heater Co., The (Heating boilers), 335-339 W. 5th St., Cincinnati, O.; 800 N. Clark St., Chicago, Ill.
- Williamson, H. C. (Band saw machines), 321-323 N. Crawford Ave., Chicago, Ill.
- Williamsport Wire Rope Co. (Wire rope), Williamsport, Pa.; New York; Boston; Chicago; New Orleans; Muskogee, Okla.; Houston; Cleveland; Tulsa, Okla.; Portland, Ore.; Seattle; Pittsburgh; Cincinnati; Detroit; Duluth.
- (See index to advertisement, pages 7, 8 and 9.)
- Williamsville Buff Mfg. Co. (Polishing wheels), Danielson, Conn.
- Willison, W. O. (Steel flag poles), Ins. Exch. Bldg., Chicago, Ill.
- Willson Goggles, Inc. (Eye protectors), Reading, Canada; Bush Terminal Sales Bldg., New York; Kansas City.
- Wilmarth & Morman Co. (Woodworking mach'y), 1175 Monroe Ave., N.W., Grand Rapids, Mich.
- Wilmington Fibre Specialty Co., Wilmington, Del.; 36 Warren St., New York, N. Y.; 125 Kimball Bldg., Boston, Mass.; 225 Marion Bldg., Cleveland, O.; 1002 Ford Bldg., Detroit, Mich.; 614 W. Adams St., Chicago, Ill.; 604 Mission St., San Francisco, Cal.; 2118 Smith Bldg., Seattle, Wash.; 426 Temple Ct., Denver, Col.; 4th and Main, San Fernando Bldg., Los Angeles, Calif.; 1015 New House Bldg., Salt Lake City; Montreal, Toronto; 141 E. 4th St., Cincinnati; Bourse Bldg., Philadelphia; 209 Alpine Ave., Pittsburgh; Corbett Bldg., Portland; 604 Federal Reserve Bank Bldg., St. Louis.
- Wilmot Castle Co. (Sterilizers), 1155 University Ave., Rochester, N. Y.
- Wilmot Engineering Co. (Crushers, screens and mach'y), Hazleton, Pa.
- Wilson & Bennett Mfg. Co. (Steel barrels), 65th St. & So. Menard Ave., Chicago, Ill.
- Wilson, D., Mfg. Co., The (Drop forgings), Mechanicsburg, Pa.
- Wilson & Daum Co. (Gas appliances), Market St. & 3rd Ave., Pittsburgh.
- Wilson-Maeulen Co. (Pyrometers), Concord Ave. & East 143rd St., New York, N. Y.
- Wilson-Miller Co. (Gears), Hoboken, N. J.; Pittsburgh; Johnstown, Pa.; Kansas City.
- Wilson-Snyder Mfg. Co. (Steam pumps), Ross and Water Sts., Pittsburgh, Pa.; New York; Cleveland; Philadelphia.
- Wilson, W. S., Corp. (Welding rods), 157 Chambers St., New York.
- Wilson Welder & Metals Co. (Electric welders), 253 36th St., Brooklyn, N. Y.; 1814 E. 63rd St., Cleveland; 532 Union Arcade Bldg., Pittsburgh; 809 Kresge Bldg., Detroit; 817 W. Wash. Blvd., Chicago; 1701 7th Ave., N., Birmingham, Ala.
- Wilson, W. W., Feed Grinder Co. (Grinders, farm and ranch), 214 S. Wichita St., Wichita, Kan.
- Wilson & Willard Mfg. Co. (Oil well tools), Los Angeles, Cal.
- Wilton Mfg. Co. (Brass cocks), Wrightsville, Pa.
- Wilton Tool & Mfg. Co. (Standard gage), Linden Park St., Boston, Mass.; McCormick Bldg., Chicago, Ill.
- Winans Instrument Co. (Graphite lubricators), Glenside, Pa.
- Winchester "D" Handle Co., The (Shovel handles), Bellevue, O.
- Windau Tool Co. (Milling cutters), 1565 East 17th St., Cleveland, O.
- Windsor Mfg. Co. (Gaskets, lead pipe, etc.), 566-74 Clinton, Milwaukee, Wis.

- Winfield Electric Welding Machine Co., The (Electric welders), Warren, O.; 12 Pearl St., Boston; 50 Church St., New York; 1017 Engineers Bldg., Cleveland; Peoples Gas Bldg., Chicago; 913 Ford Bldg., Detroit; 54 San Fernando Bldg., Los Angeles; 71 Walton St., Atlanta; 48 N. 6th St., Philadelphia.
- Wing, L. J., Mfg. Co. (Fans and engines), 352 W. 13th St., New York.
- Winkler, Chas., Inc. (Bench stops, etc.), 178-182 Emmett St., Newark, N. J.
- Winn, W. R., Co. (Lubricating oils), 488 Cherry St., New York, N. Y.; 51 Lyman St., Springfield, Mass.
- Winne, Frank W., & Son, Inc. (Oakum packing), 237 Market St., Philadelphia, Pa.; Bakewell Bldg., Pittsburgh.
- Winslow Boiler & Engineering Co. (Fuel oil burners), 65 E. Van Buren St., Chicago.
- Winslow & Co., Inc. (Pipe fittings), Portland, Me.
- Winsted Hardware Mfg. Co. (Closet screws), Winsted, Conn.
- Winter Bros. Co. (Dies, stocks, taps), Wrentham, Mass.; 154 Nassau St., New York; 111 S. Jefferson St., Chicago.
- Winterhoff Tool & Machine Co. (Bench drills), Elkhart, Ind.
- Winton Co., The (Oil engines), 81 Berea Road, Cleveland, O.
- Wire Goods Co., The (Bathroom fittings, etc.), Worcester, Mass.
- Wire Rope Lubricant Co. (Rope dressing), 40 Clinton St., Newark, N. J.
- Wirt & Knox Mfg. Co. (Hose racks), 23d and York Sts., Philadelphia, Pa.
- Wisconsin Electric Co. (Electric grinders), Dumore Bldg., Racine, Wis.
- Wisconsin Foundry & Machine Co. (Electric lighting outfits), 613-23 E. Main St., Madison, Wis.
- Wisconsin Machinery & Mfg. Co. (Gas engines), Milwaukee, Wis.
- Wisconsin Miller Mfg. Co. (Milling machines), Milwaukee, Wis., Station A.
- Wisconsin Motor Mfg. Co. (Gas engines), Milwaukee, Wis.
- Wise Furnace Co., The (Warm air furnaces), Lincoln St., Akron, O.
- Wise, J. B., Inc. (Plumbers' traps, fittings, etc.), Watertown, N. Y.
- Wise & Bailey (Belting, packing, hose), 108-112 Walnut St., Philadelphia, Pa.
- Wiss, J., & Sons Co. (Scissors and shears), 33 Littleton Ave., Newark, N. J.
- Wistrand Mfg. Co. (Hand pumps), Galva, Ill.
- Witch Mfg. Co. (Roof flanges), Rear of 28 Putnam St., Salem, Mass.
- Witt, G. E., Co., Inc., 862-64 Howard St., San Francisco, Cal.
- Witte Engine Works (Gas engines), 16th and Oakland, Kansas City, Mo.; Empire Bldg., Pittsburgh, Pa.
- Wittebann Co., The (Machinery, brewery), 842-852 Elk St., Buffalo, N. Y.
- Wizard Mfg. Co. (Pipe hangers), 15 Fayette St., Boston, Mass.
- Woburn Iron Foundry, Inc. (Grates), Woburn, Mass.
- Woher, The Max, & Son Co. (Electric water heaters), 23 W. Sixth St., Cincinnati, O.
- Wodack Electric Tool Corp. (Drills and hammers, electric), 23-27 S. Jefferson St., Chicago.
- Wold, Torris Co. (Can making machinery), 240 N. Ashland Ave., Chicago, Ill.
- Wolf, Fred W., Co., The (Refrigerating mach'y), 800 N. Clark St., Chicago, Ill.
- Wolf Co., The (Friction clutches), Chambersburg, Pa.
- Wolf Laboratories, Inc. (Disinfectants), 64 Gold St., New York.
- Wolf Safety Lamp Co. of America, Inc., 227 Grand Ave., Brooklyn, N. Y.
- Wolf, A. H., Gas Radiator Co. (Gas heaters), 4 Great Jones St., New York.
- Wolf Coal Saver Co. (Fuel economizers), 1330 W. Congress, Chicago, Ill.
- Wolf Mfg. Co. (Plumbing brass goods), 255 N. Hoyne Ave., Chicago; Dallas; Omaha; St. Louis; Denver; Hammond, Ind.; Cincinnati.
- Wolf, Norbert Co., The (Belt dressing), 40 Renwick St., New York, N. Y.
- Wolf Metal Co., The (Babbitt metal), 1803-1811 John St., Cincinnati, O.
- Wolfsox Co., Inc., The (Sanitary earthenware), Neenah, Wis.
- Wolverine Brass Works (Plumbers' brass and rubber goods), Grand Rapids, Mich.; 210 Natoma St., San Francisco; Wolverine Co., Inc., 314 W. 42d St., New York.
- Wolverine Caster Co. (Casters), Traverse City, Mich.; 232 S. Wells St., Chicago; 633 So. Union Ave., Los Angeles.
- Wolverine Foundry Co. (Plumbers' specialties), 1161-69 Bellevue Ave., Detroit, Mich.
- Wolverine Lubricants Co. (Lubricants), New York.
- Wolverine Specialty Co. (Sewer cleaner), Grand Rapids, Mich.
- Wolverine Temperature Regulator Co., The (Thermostats), 125 Exchange St., Marshall, Mich.
- Wood Bros. Thresher Co. (Engines and threshers), Des Moines, Ia.
- Wood, R. D., & Co. (Gas and waterworks equipment), 400 Chestnut St., Philadelphia, Pa.
- ♦ Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Wood, J., & Bros. Co. (Iron and steel sheets), Conshohocken, Pa.; 45 Broadway, New York.
- Wood, John, Mfg. Co. (Range boilers and heaters), Conshohocken, Pa.; Boston, San Francisco, Cleveland, Philadelphia, New York, Chicago, Los Angeles, Toronto, Ont.
- Wood, J. R., Supply Co., The (Wire rope fittings), 917-19-21 Broadway, Cincinnati, O.
- Wood, Morris & Sons (Rock drills), 5108 W. Lake St., Chicago.
- Wood Shovel & Tool Co. (Shovels, scoops, spades), Piqua, O.
- Wood, S. W., Engine Co., Inc. (Steam engines and boilers), Clyde, N. Y.
- Wood Turret Machine Co. (Turret machines), Brazil, Ind.
- Wood, William H. (Valves, pumps), Media, Pa.
- Woodall Mfg. Co. (Baling presses), Davenport, Iowa.
- Woodard Machine Co. (Rolling mill machinery), Worcester, O.
- Woodcock Bros. (Leather belting), 562 W. Randolph St., Chicago, Ill.
- Wooden Ventilator Co. (Wooden gratings), East Palestine, O.
- Woodhill Brass Co. (Plumbing brass goods), 2889 Woodhill Road, Cleveland, O.
- Woodhouse Chain Works (Chains), Third & Schenck Sts., Trenton, N. J.
- Woodhouse Mfg. Co., The (Hose fittings), 50 W. Broadway, New York, N. Y.
- Woodley Slate Co. (Trays, sinks, etc.), Bangor, Pa.
- Woodman, R., Mfg. & Supply Co. (Ticket punches), 63 Oliver St., Boston, Mass.
- Woodmansee Mfg. Co. (Chains), Freeport, Ill.; Council Bluffs, Ia.; Kansas City, Mo.; Sioux Falls, S. D.; Minneapolis, Minn.; Fort Worth, Tex.; Enid, Okla.
- Woodrow Nipple Mfg. Co. (Pipe nipples), 816 N. Spaulding Ave., Chicago.
- Woods Engineering Co., The (Woodworking mach'y), 108 Patterson St., Alliance, O.
- Woods, S. A., Machine Co. (Woodworking mach'y), 27 Damrell St., Boston; 1019 Maison Blanche, New Orleans; 520 1st Ave., S., Seattle; 119 Tazewell St., Norfolk, Va.; 294 Broadway, New York; 334 Railway Ex., Chicago.
- ♦ Wood's, T. B., Sons Co. (Power transmission mach'y), Chambersburg, Pa.
- Woodward Governor Co. (Water wheel governors), 202 Mill St., Rockford, Ill.
- Woodward-Wanger (Caulking tools), 1106-1108 Spring Garden St., Philadelphia, Pa.
- Woodward & Powell Planer Co. (Planing machines), Worcester, Mass.
- Woodwell, Joseph, Co. (Road builders' levels), 201 Wood St., Pittsburgh, Pa.
- Woodworkers Mfg. Co. (Universal woodworkers), 612 Brush St., Detroit, Mich.
- Wood Workers Tool Works (Knives), 222 S. Jefferson St., Chicago, Ill.
- Wooldorf, N. B., Oakum Co. (Oakum), 601 S. Luzerne Ave., Baltimore, Md.
- Woonsocket Machine & Press Co. (Power Transmission), Woonsocket, R. I.
- Wooster Sanitary Co., The (Plumbers' earthenware), Clarksburg, W. Va.
- Worcester Brush & Scraper Co. (Flue cleaners and brushes), 456 Park Ave., Worcester, Mass.
- Worcester Lathe Co. (Lathes), 68 Prescott St., Worcester, Mass.
- Worcester Machine Screw Co., The (Screws and friction clutches), Worcester, Mass.
- Worcester Pattern & Model Co. (Tool grinders), Worcester, Mass.
- Worcester Pressed Steel Co. (Pressed steel products), Worcester, Mass.; 1411 Central, Detroit; 15 N. Franklin St., Chicago; 520 Sweetland Bldg., Portland; 333 Front St., San Francisco.
- Wordell Plumbing Co., The (Ferrules), Taunton, Mass.
- Worden Co., W. H. (Drag saws), 126 Pine St., San Francisco; 94 First St., Portland; 528 First Ave. So., Seattle.
- Workwell Engineering & Mfg. Co. (Tapping machines and countershafts), 4145 W. Kinzie St., Chicago, Ill.
- World Beater Generator Co. (Acetylene generator), Kansas City, Mo.
- World Refining Co., The (Oil, grease, polish, etc.), Easton, Pa.
- Worns & Kemp (Refrigerator traps), 287 W. 127th St., New York, N. Y.
- Worthington Pump & Machinery Corp. (Gas engines), Cudahy, Wis.
- Worthington Pump & Machinery Corp. (Pumping, machinery), 115 Broadway, New York, N. Y.; Atlanta, Birmingham, Boston, Buffalo, Chicago; Cincinnati, Cleveland, Detroit, Denver, El Paso, Houston, Kansas City, Los Angeles, New Or-

- leans, Philadelphia, Pittsburgh, St. Louis, Salt Lake City, St. Paul, San Francisco, Seattle, Tulsa, Washington.
- Woven Steel Hose & Rubber Co. (Mechanical rubber goods), Trenton, N. J.
- Wright Machine Co. (Engines), 321-405 E. 2nd St., Owensboro, Ky.
- Wright Machine Co. (Marine motors), 321 E. Second St., Owensboro, Ky.
- Wright-Austin Co. (Steam traps), 315 W. Woodbridge St., Detroit, Mich.; 30 Church St., New York; 261 Franklin St., Boston; 190 N. State St., Chicago.
- ♦ Wright Mfg. Co. (Chain hoists), Lisbon, O.
- Wright & Alexander Co. (Concrete inserts), 285 State St., Rochester, N. Y.
- Wrigley Thomas Co., The (Toggle bolts and line-men's specialties), 504 Sherman St., Chicago.
- Wrought Washer Mfg. Co. (Wrought iron washers), 46-54 So. Bay, Milwaukee, Wis.
- Wyckoff, A., & Son Co. (Wooden water pipe), Elmira, N. Y.
- Wyckoff Pipe & Creosoting Co. (Underground conduits), 30 East 42nd St., New York, N. Y.
- Wynkoop, Hallenbeck, Crawford Co. (Supply house catalogs), 80 Lafayette St., New York.
- ♦ Wyoming Shovel Works (Shovels and scoops), Wyoming, Pa.; Chicago, New York, Huntington, W. Va.; Philadelphia, Spokane.
- Wysong & Miles Co. (Woodworking mach'y), Greensboro, N. C.
- X
- X Laboratories (Leak repair liquid), 25 W. 45th St., New York; Rialto Bldg., San Francisco, Cal.
- X. L. Refrigerating Co., 1540 W. 62d St., Chicago, Ill.
- Y
- Yale Light Co., The (Gasoline lighting systems), 213-17 N. Desplaines St., Chicago, Ill.
- ♦ Yale & Towne Mfg. Co., The (Hoists, trolleys, builders' hardware), Stamford, Conn.; New York, Chicago, San Francisco.
- ♦ Yarnall-Waring Co. (Steam valves and specialties), Mermaid Ave., Chestnut Hill, Philadelphia, Pa.; 90 West St., New York; 61 W. Lake St., Chicago; 550 Rockefeller Bldg., Cleveland; Jenkins Arcade Bldg., Pittsburgh; 612 Harrison Bldg., Philadelphia.
- Yates, F. B., Machine Co. (Sawmill and woodworking mach'y), Beloit, Wis.
- Yeomans Bros. Co. (Pumping mach'y), 1433 Dayton St., Chicago, Ill.
- Yesbera Mfg. Co. (Factory stools), Toledo, O.
- Yerdon, William, (Hose bands), Fort Plain, N. Y.
- Yoder, C. M., Co., The (Metal working mach'y), 1024 B. of L. E. Bldg., Cleveland, O.
- Yoder-Thomas Mfg. Co. (Thermostats), 1024 B. of L. E. Bldg., Cleveland, O.
- Yohe, Wm. S., Supply Co. (Pipe storage racks), Canton, O.
- Yonts, C. H., Co., The (Plumbing specialties), Meadville, Pa.
- York Foundry & Engine Works (Elevator mach'y), York, Pa.
- York Mfg. Co. (Engines and refrigerating mach'y), York, Pa.; Monadnock Blk., Chicago.
- ♦ Yost Mfg. Co. (Vises), Meadville, Pa.
- Young's Boiler Compound Co. (Boiler compound), Catasauqua, Pa.
- Young Bros. Company (Industrial ovens), 6500 Mack Ave., Detroit; 22 W. Monroe, Chicago; 708 Engineers' Bldg., Cleveland; 52 Vanderbilt Ave., New York.

- Young, C. C. Jersey Shore, Pa.
- Young, Corley & Dolan, Inc. (Tool grinders), 28 and 30 W. Broadway, New York, N. Y.
- Young, E. R., & Sons (Steam pumps), Titusville, Pa.; Marion, Ind.
- Young, John T., Boiler Co., The (Heating boilers), Norwich, Conn.
- Young, Joseph H., Company (Plumbers' specialties), 80-82 High St., Boston, Mass.
- Young Pump Co. (Steam and power pumps), Michigan City, Ind.
- Youngstown Foundry & Machine Co. (Lathes, shears, etc.), Youngstown, O.; Singer Bldg., New York.
- ♦ Youngstown Sheet & Tube Co., The (Pipe, sheet steel, etc.), Youngstown, O.; Boston, New York; Chicago, Philadelphia, Atlanta, Dallas, Pittsburgh, Detroit, Denver, St. Louis, San Francisco, Seattle. Stocks carried by Continental Supply Co., St. Louis, Mo., with branches at Bridgeport and Robinson, Ill.; Coffeyville, Kan.; Shreveport, Mansfield and Oil City, La.; Marietta, Lancaster and Logan, O.; Wann, Bartlesville, Cushing, Drumright, Tulsa, Morris and Henryetta, Okla.; Pittsburgh, Pa.; Houston and Wichita Falls, Tex.; Charleston and Clarksburg, W. Va.; Casper, Wyo.
- Youza Fittings Co., The (Pipe fittings), Dunkirk, N. Y.
- Ypsilanti Machine Works (Flour mill machinery), Ypsilanti, Mich.
- Yuba Manufacturing Co. (Traction engines), Marysville, Cal.
- Z
- Z. T. Soot & Gas Consumer Co. (Fuel economizers), 346 Main St., Oshkosh, Wis.
- Zaubitz, August (Gauges, pyrometers, thermometers), 95-97 Cliff St., New York, N. Y.
- Zeh & Hahnemann Co., The (Power presses), Vanderpool St. and Ave. A, Newark, N. J.
- Zeller & Nagel (Saws, machines), 232 Java St., Brooklyn, N. Y.
- Zellweger, J., & Sons (Air washers), 1900 Adelaide Ave., St. Louis, Mo.
- Zelnicker Crayon Works (Industrial crayons), 325 Locust St., St. Louis, Mo.
- Zelnicker, Walter A., Supply Co. (Car movers, babbitts, etc.), 325 Locust St., St. Louis, Mo.
- Zenite Metal Co. (Stampings and dies), 201 N. West St., Indianapolis, Ind.
- Zenner Products Co. (Disinfectants), 451 W. Larned St., Detroit, Mich.
- Zering, H., Mfg. Co. (Trucks and barrows), 528 Reading Rd., Cincinnati, O.
- Zernickow, O. (Gage standard), 15 Park Row, New York, N. Y.
- Zero Oil Company (Oil), 101 1st St., Parkersburg, W. Va.
- Zibell, J. A., Co. (Oils, greases, etc.), 273 Water St., New York, N. Y.
- Ziermore Valve Co. (Pressure regulators), Johnsonburg, Pa.
- Zimmer Conrad Belting Co. (Leather belting), 70 Fulton St., New York.
- Zimmerman Mfg. Co. (Wooden handles), 301 Cedar St., Owosso, Mich.
- Zu Bar Mfg. Co., Inc. (Lathe tools), 5701 McMahon Ave., Germantown, Philadelphia, Pa.
- Zunner Machines Co., The (Coopers' and brewers' mach'y), Boston, Mass.
- Zurn, J. A., Mfg. Co. (Plumbers' supplies), Erie, Pa. (See index to advertisement, pages 7, 8 and 9.)
- Zwermann Co. (Water closet tanks), Robinson, Ill.



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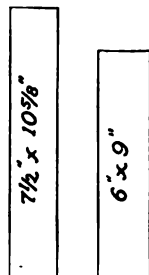


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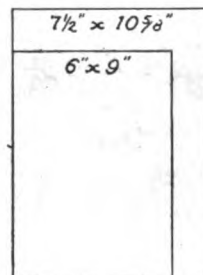


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